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INSTINCT AND PERSONALITY

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BY

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TO

MY WIFE

IN APPRECIATION OF

LOYAL CO-OPERATION

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PREFACE

THIS work is substantially that of a thesis on " The Problem of Personality in the Light of Recent Psychology " for which I was, in 1925, awarded the degree of Doctor of Letters in the University of Melbourne. The original treatise has, however, been thoroughly revised in the hope of making it of value to a much wider public than it would be likely to reach in its earlier form. The detailed discussion of the different schools of psychological thought has been largely cut down, a purely speculative conclusion has been reserved for fuller and maturer treatment at a later date, and a chapter (Chapter V) has been added giving a detailed discussion of the principal human instincts and presenting and applying a criterion for their classification advocated, in less extended form, in a paper read at a recent meeting of the British Psychological Society in London.[1]

While the principal aim of the book is to present and apply an original viewpoint in psychology (and it is therefore more especially addressed to the serious student of the subject), the needs and interests of the reader have not been overlooked. In particular, I have striven to make the work comprehensible and helpful to such intelligent and thoughtful members of the general community as are found in the Workers' Educational Association, the organization with which my work as a teacher has been principally connected for the past five years.

My thanks are due, for valuable criticisms and suggestions, to Professor McKellar Stewart, of Adelaide; Professor Boyce Gibson, of Melbourne; and Dr. F. Aveling, of King's College, London. To the last named, especially,

[1] Published in *The British Journal of Psychology*, January, 1928.

the book owes much both in clearness and accuracy, as I have had the opportunity of discussing it in detail with him while working this year as research student at King's College. This does not mean that the opinions expressed are necessarily shared by any of these gentlemen; but the reader is assured that the faults of the book would be much greater than they are were it not for the help they have given.

A. CAMPBELL GARNETT.

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INSTINCT AND PERSONALITY

CHAPTER I

THE URGE OF LIFE

UNDER the penetrating searchlight of modern scientific investigation the universe is beginning to take on a fluid appearance. There is nothing static or solid left in it. The physicist has reduced matter to an organization of perpetually moving units of energy which in themselves are not matter. The psychologists (except for the Behaviourist school) are more and more clearly conceiving mind in terms of real activity. Conation, not cognition, is coming to be regarded as the essential mental fact. Mind, like matter, is being thought of as fundamentally dynamic. In this new conception there lies reason for hope that we may before long achieve some clearer idea of their ultimate connection. But the new view of mind needs clarifying and stabilizing, and it is to attempt some contribution toward that task that this work is written. We shall endeavour to show how thoroughly consistent with all the known facts is the dynamic view of mind. Incidentally we shall constantly point to the flood of light that is thrown by this interpretation of mind on common facts of human and animal behaviour and shall touch on some of the conclusions to be drawn for sociological theory. Lastly we shall inquire as to what answers this discovery of the dynamic nature of mind would suggest to the great questions of the place of mind in the universe and the nature of that mystery we call human personality.

It is surely in the springs of human action, if anywhere, that the key to the problem of personality is to be found. No one could find out what a steam-engine is by reducing it to atoms of iron. It is only by seeing what the machine does and discovering why it does what it does that we can learn what it is. Similarly, we shall not find out what man is by reducing him to cells or to molecules. It is only the study of what man does that holds out hope of a solution; it is only in so far as we can learn the sources of his actions that we shall know the meaning of his existence. It is to psychology, therefore, that we must look for the solution of the problem of personality and for consequent guidance in the development of that society of which personalities are at once the constituent units and the ultimate ends.

It is an age-old problem; but we are nearer to the heart of it to-day than ever we have been before. The nineteenth century solved some of the greatest mechanical problems of the ages. The twentieth bids fair to be known as the period wherein man's most important psychological difficulties found solution. The great change that has come over psychology and its kindred sciences to-day and the great revival of interest in them is due, not so much to the fact that the psychologist has been healing the sick, reforming the school, and creating efficiency in industry, as to the insight into life that has come with the great new view of the springs of human action.

Socrates believed that man is so splendidly rational that all his folly and wickedness must be due to error. If man only knew what was right and knew that righteousness was in his truest interests, then, Socrates believed, he would surely do it. Virtue, therefore, he said, is knowledge; vice is ignorance. On this foundation Plato built his ideal state. But his carefully instructed princeling of Syracuse failed to develop into a philosopher king. Plato concluded that the barrier of human ignorance was too great and for

a foolish people designed a second-best state ruled by Law. Aristotle, distrusting the Socratic dictum, but still enamoured of the supreme value, if not the supreme power, of human reason, worked out a system of ethics wherein the standard of virtue was but the rationally decided mean between extremes. But the failure of this "rational" ideal to account for man's nobler purposes is seen in that Aristotle was constrained to justify slavery as essential to man's "highest" good, the speculative activity of reason.

This fetish of man's rationality dominated philosophy for more than two millenniums and only partially gave place to a new theory when Bentham declared man to be placed under two sovereign taskmasters, pleasure and pain, whose prerogative it is to declare what man ought to do and to determine what he will do. But this theory also failed to fit all the facts. Men, and women perhaps even more than men, do noble things sometimes which no calculation of resultant pleasures and pains can explain. They do ignoble things sometimes which they would not have done had they stopped to think of results at all. Many of man's desires this hedonism failed utterly to explain. At last psychologists concluded that things are not always desired because they are thought pleasant, but that often they are thought pleasant because they are desired. Gradually thinkers have been convinced that man's reason does not control his life and that pleasure and pain are not his only motives, that man is neither so splendidly rational nor so basely self-seeking as philosophers of the past believed him to be. Reluctantly the philosophic world has come to admit that man is, in the first place and in the last analysis, a creature of *impulse*. Perhaps the admission may have been humiliating, but it has been enlightening and, when properly understood, may prove inspiring too.

When we come to examine these impulses for the secret of their source we find that the inquiry takes us back into

the origins of the human species, and there we find a common beginning for those impulses which man experiences in common with the lower animals. It takes us upward, too, to analyse man's finest motives and find in them a factor that seems peculiar to him. Most surprising of all, we discover that the origin of human motives is not always to be found in the individual's immediate consciousness; and we are forced to study the movements of his mind in various abnormal states and in varying degrees of consciousness, or, as it seems, in unconsciousness.

With this diversity of material before us we can understand the question that has been raised as to whether the mind of man is a unit after all. Our task, however, is to gather the material from all sources and examine the interpretations of it given by many writers; then to seek to find some common threads running through the strands we have collected and see whether they lead us to any ultimate source of human actions the discovery of which will reveal to us what man is and what is his place in Nature.

The explanation of man's activity with which modern psychology provides us is the enigmatical one that man acts because he must act. All life is essentially active. A stone may lie inert or be tossed around, the sport of forces outside it. But the living thing can never be entirely so. There is an auto-motive principle within it which must and will express itself and which plays some part, however small, in the destiny of the organism. At the human level this restless activity of life is fully manifest. To do nothing is an impossible task. Suppose a man should try. He may recline himself at ease and for a time may move no muscle of his body. But the mind still works. Thoughts and images chase each other in and out of his consciousness. Perhaps he falls asleep, but while he is unconscious a thousand processes of life still go on within him. Presently

he wakes and begins to stir himself. He remembers his resolution to remain still, and controls his desire to move his limbs. At length he must permit himself some change. More and more restless he grows. The life within him calls for fuller expression in a dozen ways. At last it urges expression in *any* way so long as it puts an end to the unbearable inertia. Simply because the organism *lives* it must *act*.

Why is life thus urgent? Is it merely because the organism has taken in certain quantities of food and drink and, by those wonderful chemical processes which go on within the body, has made the potential energy in them available for movement? Is the felt urgency to movement merely due to the fact that the potential energy in the foodstuffs imbibed and devoured is greater than is needed for the mere maintenance of physiological processes and that there is therefore a quantity of superfluous physical energy pressing, like steam in a boiler, to be worked off in motion? There are some facts which lend colour to such a theory. The healthy man certainly does absorb in food more potential energy than is needed for the mere maintenance of the body. Further, it is at times when his food supply has been ample and when his physical organism is healthy, and therefore capable of making available for movement the greatest possible quantum of energy, that he usually feels most urgently the drive from within toward expression in action. If the urge of life can be explained as the drive of superfluous physical energy, then our problem becomes merely that of explaining by what mechanism the energy is directed into the various channels of expression which human life displays.

Some writers have endeavoured to explain the play of young animals and children on this theory. It is pointed out that play is only manifested in the life of the young of those animals which spend a period of protected infancy

nourished by their parents. These young creatures have a store of superfluous physical energy which must needs find expression and which is therefore worked off in play. Where play is found in adult life it is almost exclusively among classes which have a certain amount of leisure, whose whole energy is not needed for the serious business of living. Other motives, such as emulation, may sometimes prompt to playful activities among adults, but even this is regarded as due to the accumulated and surplus energy of certain instincts, especially the "predatory instincts." [1]

The mechanism of this expression of surplus energy is thus explained by Spencer [2]:

"Nerve centres, disintegrated by action, are perpetually re-integrating themselves, and again becoming fit for action. . . . In proportion as any part of a nerve centre has been for a long time unused—in proportion, that is, as repair of it has gone on day after day and night after night unhindered by appreciable waste, it must be brought to a state of more than ordinary instability—a state of excessive readiness to decompose and discharge. What must happen? In common with all other parts, it is exposed to those reverberations which from instant to instant fill the nervous system. Its extreme instability must render it unusually sensitive to these reverberations—unusually ready to undergo change, to yield up molecular motion and to become the seat of the concomitant ideal feeling. . . . Here we have the interpretation of what are called *desires*. Desires are ideal feelings that arise when the real feelings to which they correspond have not been experienced for some time.

"Every one of the mental powers, then, being subject to this law that its organ when dormant for an interval

[1] Herbert Spencer: *Principles of Psychology*, § 534.
[2] *Ibid.*, § 534.

longer than ordinary becomes unusually ready to act—unusually ready to have its correlative feelings aroused, giving an unusual readiness to enter upon all the correlative activities, it happens that a simulation of those activities is easily fallen into, when circumstances offer it in place of the real activities. Hence play of all kinds—hence this tendency to superfluous and useless exercise of faculties that have been quiescent. Hence also the fact that these uncalled-for exertions are most displayed by those faculties which take the most prominent parts in the creature's life."

The theory as thus outlined by Spencer is easily refuted by Karl Groos,[1] who points out that much of the play of the young cannot be due to the accumulated energy of nerve centres and organs which have been "dormant for an interval longer than ordinary," for it is in no sense imitative of actions already performed many times, but is rather premonitive of actions later to be performed with serious intent. "The experimenting of young children and young animals," says Groos, "their movement, hunting and fighting games, which are the most important elementary forms of play, are not imitative repetitions, but rather preparatory efforts." "The most important and elementary kinds of play can be attributed neither to imitative repetition of the individual's former acts nor to imitation of the performances of others."[2]

Play, then, is certainly not due to superfluous energy accumulated in particular nerve centres. Is it due, as Schiller and others have suggested, to surplus energy of the organism as a whole? As has already been pointed out, there is much evidence to support this view, and it is not surprising that it should have been readily adopted by so many. It is certain that when the energy of the body is at its highest the individual is the more eager for play. But,

[1] K. Groos: *The Play of Animals* (translated by E. L. Baldwin), p. 7.
[2] *Ibid.*, p. 9.

on the other hand, children and animals play until they are exhausted; they play until not merely all surplus energy is used up, but until they have energy left for nothing at all. Even when tired, energy can often be found for play—a child or a dog, wearied with a long walk, will find fresh vigour to leap and run if the chance be offered of a game.

It is plain, then, that that which urges the individual to play is something more than the pressure of physical energy seeking an outlet. Either something from outside or some other power from within is capable of stimulating the individual to the expression of the last ounce of energy in play. For the present the question must be left undecided; but we shall return to the discussion of it in the next chapter and shall find that a place must be given to both these alternatives in order to obtain a complete explanation of the phenomena.

As the theory of surplus physical energy fails to explain play, so does it fail to explain the more serious activities of living creatures. It would never be claimed, of course, that those activities which are aimed at the meeting of obvious physical needs are due to superfluous energy. But this explanation will no more suffice to explain those activities, seen especially in adult human life, which are too serious to be called play, but which are prompted by no immediate needs. Individual men and women differ enormously in the amount of "energy" they display. Some are content to meet their physical needs with as little effort as possible. Others are ever looking for fresh worlds to conquer. But this "energy" is not surplus physical energy. History tells of many a Nelson who, with small, frail body, has manifested an intensity of life and vigour, a tirelessness and a boldness of endeavour, which put to shame the majority of men with far greater physical powers. Obviously this urgency which such men

have felt within them, driving them to the limit of their physical powers, is something more than superfluous physical energy. It is something, too, which may be expended in ways which do not absorb physical energy. The keen student fresh from a vacation, full of " energy " and eager for work once more, may find that he cannot " work off his energy " successfully in playing football, but that it finds the right outlet in the quiet of his study with his books. Plainly, then, the " urge of life " is not merely the pressure of unused physical energy. A store of physical energy is probably an essential to all activity as we know it. But there is at least some activity in which another factor is operative, a factor which urges the organism to some expression of itself. And the more we study this factor, the closer the scrutiny to which we subject it, the clearer will the conviction grow that here we are face to face with *mind*.

CHAPTER II

THE NATURE OF INSTINCT

The next fact of which we must take cognizance is that this urgency of life is not merely general in its expression. The prisoner shut in a narrow cell with nothing whatever to do may find that *any* activity gives him relief. Any means of expression of the life within him is better than none. But normally it is toward some *particular* activity that we feel urged, and the nature of this particular activity varies in different circumstances. The child which sees some bright object on the floor will be impelled to crawl towards it, pick it up and examine it. The boy who is struck by an opponent in a football match will experience an impulse to strike back. The dog that sees a rabbit near by is filled with an uncontrollable impulse to give chase. The impulse to activity is usually thus specifically purposive. It is, except under exceptional circumstances, an urge to a particular line of activity with a certain more or less definite end.

The indefinite urge to any activity, no matter what, only arises when prolonged inaction has become a burden. Then any form of expression promises to afford relief. The nature of the end to which the felt urge impels changes with changing circumstances. It may urge to the obtaining of food, to the display of physical prowess, to social intercourse, or to any other of the activities in which individuals of the species may engage. Nearly all the activities of man, and apparently of the higher forms of animal life, are called out in response to some such urge. These urges are so constant in arising under certain stimuli, and the purposive activity which satisfies them is of such a definite

nature, that we can readily distinguish a number of different types of urge. These types of urge, singled out in human experience and assumed from the conduct of animals to form a part of their experience also, are what psychologists have agreed to denominate the *Instincts*.

Some psychologists are of the opinion that the whole of the activity of living creatures can be traced ultimately to the dynamic provided by a comparatively few instincts, and that even man's highest rational and moral decisions and achievements are moved by the complicated interworking of these distinguishable types of impulse such as man shares in common with the lower animals. This is a question to which we shall return later; but it must be freely recognized now that this is true of the greater part, if not all, of our activity, while in the lives of the lower animals instinct can be made to account for everything that is not of lowlier origin still. The urge of life, then, is, to a very large extent, if not entirely, the urge of these various instincts. The question of the springs of human action becomes, therefore, first and foremost, the question of the nature, origin and working of the instincts. We have already seen some reason to believe that mind (whatever that may ultimately be seen to be) is an important factor in the instinctive urge. Whether this is really so and what is the part it plays we must endeavour to decide. We can best do this by a comparison of instinctive action with those types of response of the living creature to its environment which, though not instinctive, most resemble instinct. These responses in their simpler forms are known as reflex actions.

There is an obvious fatality and automatism about much instinctive action, especially as it occurs in insects and other creatures of low intelligence, which has led many psychologists to agree with Herbert Spencer's dictum that instinct is merely "compound reflex action." A splendid example

of this aspect of the working of instincts is quoted by Hobhouse. It is an observation and experiment of Fabre with a certain species of solitary wasp.

"A solitary wasp, *Sphex flavipennis*, which provisions its nest with small grasshoppers, when it returns to the cell leaves the victim outside, and goes down for a moment to see that all is right. During her absence M. Fabre removed the grasshopper a little. Out came the Sphex, soon found her victim, dragged it to the mouth of the cell, and left it as before. Again and again M. Fabre moved the grasshopper, but every time the Sphex did exactly the same thing, until M. Fabre was tired out." [1]

The important point is not that the wasp revealed no intelligence in grasping the changed situation. A subsequent experiment by Fabre on another individual of the Sphex species revealed that the creature was able to bring some degree of intelligence to bear on it. The point is that the *normal* activity was performed, apparently, without the use of intelligence. It seems to approximate to a chain of reflexes.

Now, reflexes are purely physiological. They are neural mechanisms the special function of which is to secure the appropriate response to stimuli without the intervention of intelligence. To understand their significance it must be remembered that no pain or other sensation is felt by an individual until the stimulus has passed from the end organ of sense along the nerve fibres to the brain. If it were not for the existence in the nervous system, therefore, of what is called a reflex arc, the hand that touches a red-hot iron would not be withdrawn until the stimulus had travelled from fingers to brain and had thus created a sensation of pain; the meaning of this situation would then have to be grasped, a decision made to withdraw the hand, and the stimulus directed to the appropriate muscles

[1] Hobhouse: *Mind in Evolution*, p. 55.

to cause them to contract. But meantime the flesh would be burning. To secure a speedier response to such stimuli Nature has provided that immediately the stimulus reaches a certain centre (these centres are situated in the lower brain or the spinal column) it shall be redirected straightway to the muscles the contraction of which will remove the hand from danger. This neurological connection between sense organ, nerve centre and muscle or effector organ is called a " reflex arc."

The physiological modification which accomplishes this direction of the stimulus through the complex network of the nervous system in the path of a definite " arc " is generally supposed to be a lowering of the threshold of resistance at certain points of contact (synapses) of the neurones. Most of the nine or ten thousand million neurones of the nervous system are linked up with several other neurones, so that, theoretically, a stimulus beginning in one neurone may be passed on in several different directions. The stimulus, in point of fact, however, does not thus distribute itself. It follows a certain definite course. It follows this course, we may assume, because it constitutes, for that particular stimulus, the course of least resistance. Reflex arcs are therefore pathways of low resistance in the nervous system which direct stimuli of a certain kind to a certain definite end and thus produce an organic response which is both rapid and definite, and which is also, in general, appropriate to the situation.

Many reflex arcs are a part of the innate constitution of the living creature. It is generally believed, however, that similar pathways of low resistance, resulting in regular and automatic response to certain stimuli, are formed in the course of experience by the constant repetition of an action—the constant passage of a stimulus along a certain pathway having worn down the resistance to itself which

is normally encountered at the synapses of the neurones. Thus is explained, on physiological grounds, the formation of habits. In this way, by the linking of sense stimulus with motor response through the medium of innate and acquired reflex arcs, a complicated chain of movements may be performed as automatically as in the successive turning of wheels and levers in an elaborate piece of machinery.

The activity of the Sphex in provisioning her nest, which has been referred to above, apparently approximates very closely to just such a chain of reflexes—and in her case innate reflexes. But can all instinctive responses of men and animals be explained as the result of such purely physiological mechanism? Is the urge of life, which we have already observed, merely due to the physiological direction of sense stimulus to motor organ? For an answer to these questions we must enter on a closer study of instinctive action to see whether there enters into it anything not susceptible of explanation in these purely mechanical terms.

The essential difference between reflex and instinctive action is this. Reflex action is the innately determined organic response to a sensory stimulus. Instinctive action is the innately determined response of the whole organism to the perceived *meaning* of a situation. Professor Stout,[1] in discussing the evidence of a psychological factor in instinct, points to three characteristics of instinct as proof of its presence. Each of these characteristics involves the fact which we have stated: that instinct is a response, not to a sense stimulus merely, but to a perception of meaning.

Stout's first argument is that instinctive activity involves processes of selective attention. "The whole behaviour of the animal throughout the course of an instinctive activity, even on its first occurrence, shows all the outward

[1] *Manual of Psychology*, pp. 344 ff.

characteristics of attentive process. It is marked by adaptation of the sense organs to certain stimuli rather than others, and is throughout pervaded by the attitude of waiting, watching and searching for future impressions. The bird gathering materials for its nest, ants tending eggs and larvæ, a cat or a crab lying in wait for prey, take the initiative, so to speak, and go out to meet coming impressions. Thus the successive parts of a complex instinctive process, instead of appearing to the observer as a mere sequence of separate actions each evoked by its own separate stimulus, irresistibly suggest conative unity pervading and connecting them as stages or phases in the development of one continued action." [1]

The attentive processes here described, it is to be noted, are selective. The instinctive attention of the bird is directed to certain pieces of stick or grass and to certain ways of putting them together, that of the cat to small birds and animals suitable for food. The selective activity of the attentive process is determined in each case by the *meaning* of the objects perceived. The attentive process itself is a response to that meaning.

Stout's second argument is that instinctive behaviour manifests what has been aptly called "persistency with varied effort." "Where a certain mode of action fails to have a certain effect, the activity is renewed again and again under relatively novel forms until success is reached. A dung-beetle rolling its dungball along the sand finds itself in a hollow, the sides of which are too deep for the ball to be pushed up from below. The beetle accordingly butts down the sand at one side so as to produce an inclined plane of much less angle. . . ." "Such behaviour as this shows clearly that instinct does not consist merely in a congenital arrangement through which a certain stimulus elicits certain movements. What it essentially involves is

[1] *Manual of Psychology*, p. 344.

rather an impulse which requires for its satisfaction the doing of something in the sense of achieving a certain perceptible result." [1]

This, again, means that the instinctive action is the creature's response to the perceived meaning of a situation. It is not a matter of a certain stimulus having mechanically elicited certain movements. It is a matter of a certain stimulus (or group of stimuli) having conveyed a certain meaning, part of which meaning is a certain sense of dissatisfaction with the environment as it is and a more or less explicit and definite desire for changes in that environment, for the "achieving of a certain perceptible result." It is the meaning of the perceived situation as unsatisfactory in certain ways which impels the creature to activity (the neurological mechanism for which may be wholly innate or partially acquired) which changes the situation in certain satisfactory ways.

In the third place, as a final mark of the mental factor in instinct, Stout points out that "animals in their instinctive behaviour show the capacity of profiting by the lessons of previous experience. . . . The series of actions by which animals provide themselves with food is initially determined by their inherited constitution. But they learn from experience to search for it in the special places where they have previously found it in greater abundance, and to neglect those which have proved barren. It is also to a large extent by actual experiment that they learn to distinguish between different kinds of food as more or less agreeable so as to prefer what best suits their taste. . . . In this way instinctive activities become gradually more specialized and discriminative. But experience also operates in another way. It brings about the extension of instinctive modes of behaviour to new circumstances so that they occur in response to conditions which would not otherwise

[1] *Manual of Psychology*, p. 345.

evoke them. . . . The following example, given by Mr. Lloyd Morgan, may be taken as typical: 'A moorhen chick for whose benefit we had dug up worms with a spade, and which, standing by, jumped on the first turned sod and seized every wriggling speck which caught his keen eye, would run from some distance to me as soon as I took hold of a spade.' " [1]

There is an important difference, as Stout points out, between these modifications of instinctive activity under the influence of experience and such modifications of reflex actions as may be wrought in experience. There is certainly a similarity between the arousing of the food-seeking instinct in the moorhen by the promise contained in the sight of a spade and the rousing of a fit of laughter (a modification of the reflex which is possible in some persons) by the mere threat of tickling. But there is also a difference. " The person who has a fit of laughter on the mere threat of tickling behaves as he would do if he were being actually tickled. He does not merely make preadjustments preparatory to dealing with the actual stimulus when it shall arrive. The moorhen chick, on the contrary, when it saw Mr. Lloyd Morgan with his spade, did not begin at once to snap its beak at worms which were not there. The instinctive impulse was aroused, but it expressed itself in a form intelligently adjusted to the special circumstances. It took the form of running toward the man with the spade as a preparatory step in the total activity of procuring food." [2]

Now if learning by experience is an intelligent process, Stout continues,[3] the intelligence involved in instinctive activity must have been present on the first occasion when the action was performed. The first occasion when the instinctive activity appears as modified by experience shows that the lesson has been already learned. The learning,

[1] *Manual of Psychology*, pp. 347–8.
[2] *Ibid.*, p. 349.
[3] *Ibid.*, pp. 350–4.

therefore, took place on the previous occasion or occasions. All that we know of learning by experience shows that it is conditioned by attention and continuity of interest leading to the formation of appropriate dispositions and associations, and so to the acquirement of meaning, etc. Intelligence, therefore, would seem to be involved, even in the first expression of an instinct in action, to this extent: (1) that it manifests attention, selective and prospective, making possible the guidance of motor activity by complex and variable groups of sensory data; (2) that it reveals appreciation of relative success and failure, making possible persistency with varied effort.

Here again, then, we have proof that instinctive action is an innately determined response to the meaning of a situation. The moorhen's instinct to eat worms is not merely a reflex whereby the sight of a worm sets in motion a chain of muscular contractions resulting in the picking up and swallowing of the worm seen. It is a response to a perceived situation which means the satisfying experience of eating upon the performance of the movements necessary to pick up and swallow the worms. When the sight of the man with a spade has become so associated with that experience as to convey a similar meaning, then the bird responds to the new situation. Further, in that it modifies its behaviour by adapting it to a certain difference in the situation (its activity begins by running to the spot, not by making the movements of picking up imaginary worms) it shows that in each case its response is intelligently adapted to the total relevant meaning of the situation as a whole. The intelligence involved is not merely the kind of intelligence which is needed for the repetition of actions the ability to perform which has been previously acquired; it is the kind of intelligence required to adapt behaviour to a perceived change in the environment. It is an intelligence which involves selective interest, a " prospective " attitude

of mind, power to appreciate relative success and failure. It is therefore an intelligence which grasps the meaning of a given situation, and which appreciates changes in the meaning of the situation. The fact that perceived changes in this meaning result in adaptations of behaviour relevant to those changes shows that the instinctive behaviour is, all through, a response to the perceived meaning of the situation. If a certain individual of the *Sphex* species of wasp fails to adapt its behaviour to a change in the situation, it is because its intelligence is too slow to grasp the *meaning* of the change. An instinctive action, then, may be tentatively defined as an innately determined response to the perceived meaning of a situation. With this definition before us we are able to see the relationship between instinct and expectation. *For meaning, in so far as it is more than the cognition of immediate experience, is composed of expectations.* This fact has been strongly stated by L. L. Thurstone.[1]

For an illustration of meaning at the perceptual level we may refer again to Lloyd Morgan's moorhen which ran to meet him when it saw him with a spade. Worms, to the bird, meant objects to be picked up and swallowed. Its instinct gave them this primary meaning, and this meaning, be it noted, is largely composed of expectations of activity. Experience of eating worms soon gives them a further meaning for the bird. The meaning comes to include expectation of certain experiences of taste and satisfaction of appetite following on the activity of eating. Still, the meaning, in so far as it is more than the cognition of the immediate experience, is composed entirely of expectations. After the sight of its benefactor with a spade has, on a number of occasions in the bird's experience, been followed by the finding of worms, the percept of the spade comes to include within its meaning the finding of worms. But

[1] *British Journal of Psychology*, 1924.

when the man with the spade is seen some distance off, the meaning conveyed is different from that conveyed by the spade in close proximity to it and in use in digging. In the latter case the expectation aroused is that of immediate finding of worms. In the former case the total percept includes that of distance—distance between the bird and the satisfaction of its want. This percept of distance separating it from the object desired and attended to carries with it, as part of its meaning, the expectation of certain behaviour—that of running to the spot. Thus, all through the perceptual process, the meanings which enter into the percept largely consist of expectations of activity and of experience, and of this activity and experience related in a certain sequence more or less clearly foreseen.

Now a percept consists of sensation *plus* meaning: a concept or other non-perceptual idea consists, it is generally believed, of memory image *plus* meaning.[1] We may distinguish two types of non-perceptual ideas. These are, first, ideal representations of some definite object, such as my idea of the table in the next room or of Julius Cæsar; second, concepts—ideas the meanings of which refer to a whole class of objects (such as the ideas conveyed by the term "carnivora" or the indefinite word "house"), or to some general proposition, such as "that two *plus* two is four."

The meaning included in these non-perceptual ideas consists of expectations just as does that of percepts. Into these latter, however, especially into concepts, there is apt to enter a much more complex system of relations between the actions and experiences expected. The man who goes out, spade in hand, to dig worms for a moorhen, has in mind an idea of the bird and of the activity he intends to engage in. This idea is a complex of expectations clustering

[1] There is, however, strong evidence for the view that a thought *may* be imageless. Cf. F. Aveling: *The Consciousness of the Universal.*

around a certain complex and changing image of the bird and the act of digging. Even though he is a psychologist performing this service for the bird with a view to studying its instinctive reactions and its powers of learning by experience, the meaning of the situation to him is a tissue of expectations. The words "instinctive behaviour," e.g., mean to him a certain class of actions which one may expect to observe in living creatures under certain conditions. If his mind dwells upon the term to explicate its exact meaning and all the cases of activity to which it may apply, every additional particle of meaning that enters his mind consists of expectations of possible activity and experience.

Here, then, we have meaning, in all its three forms—in percept, in ideal representation, and in concept—reduced to the simple fact of expectation, *plus*, of course, the cognition of the actual present experience. No other interpretation is possible. The meaning of an object always includes the expectations we have of certain activity that might, or will, be entered upon in regard to it and of certain experiences that would follow according to our relationship to it.

If meaning is thus largely composed of expectation, then our tentative definition of instinctive activity, formulated above, can already be modified and made more precise. An instinctive action, we can now understand, is the innately determined response of the organism to the expectations aroused by the perception of certain objects. But expectation of an activity normally initiates that activity. The proof of this will be given in the next chapter. The fact to be explained, therefore, is not that action should follow upon the arousal of expectations of action, but that certain expectations of action should form a part of the meaning of certain objects without the creature having had any prior experience of such activity in relation to them. Instinct, therefore, may be still more precisely defined as

the innate determination of the meaning of certain presentations to include the expectation of certain behaviour on the part of the creature toward the objects presented.

Instinctive behaviour, then, like all behaviour, is the response of the physical organism to expectations of activity aroused within the mind. If, in the course of experience, the expectations aroused by a given situation change, then the creature's behaviour likewise changes. If some other situation comes to arouse the same expectations as those native to an instinct, then the activity appropriate to that instinct is called forth in that new situation. Thus may an instinctive response become modified by experience until it can no longer be called instinctive. All activity is the response of the organism to the perceived meaning of a situation. It is instinctive activity in so far as the expectations of activity involved in the meaning perceived are innately determined.

The next question is that of the mechanism of this innate determination of meaning. How is it achieved? What is there in the half-grown kitten which, when it sees its first mouse, gives to that group of visual sensations the meaning, as a percept, first of an object to be chased and caught, then of one to be played with, then of one to be eaten? What is there in the moorhen which, upon its first sight of a dog, gives to that percept the meaning of a creature to be avoided by diving? This innate determination of action (which we have decided to be due to the innate determination of the meaning of the stimulating percept) is the distinguishing feature of instinctive action. It was this that led Wm. James to define instinct as "the faculty of acting in such a way as to produce certain ends, without foresight of the ends and without previous education in the performance." [1] Instinctive responses are independent of prior experience, and they manifest a

[1] Wm. James: *Principles of Psychology.*

certain regularity throughout the life of the individual and (except for differences of sex or caste) in every member of the species. These peculiarities point to their dependence on some facts of structure in the body or mind of the living creature. On this point psychologists are agreed, but the nature of this structure presents a more intricate problem.

Is the structure of an instinct mental or physical, or both? All three theories have their advocates. Both mental and physical factors enter into the instinctive process, and this suggests that the structure must be, at least in part, mental. Indeed, since meaning, or expectation, is the central and deciding factor in the process it is quite reasonable to suppose that the instinct itself is a purely mental structure interacting with the body as a physical medium. Probably the most popular view to-day is that of instinct as a "psycho-physical disposition" as defined by Wm. McDougall in his *Social Psychology*,[1] and as still preferred in his recent *Outline of Psychology*.[2]

There is, however, an important objection to this view on metaphysical grounds. Can mind, as distinct from body, be regarded as something sufficiently static to possess a structure including, or consisting of, these relatively rigid and exclusive systems linking sensation with purposive motor response? If the possibility of interaction between the phenomena which we are accustomed to distinguish as body and mind be allowed, then there is no need to postulate any but a physical structure. The theory of "interaction" has its own peculiar metaphysical difficulties which we shall not pause to discuss here. They have probably been magnified by the drawing of too sharp a distinction between the physical and mental. We shall later make a suggestion toward an interpretation of matter which makes these two phenomena not so entirely discrete as they are commonly regarded and renders

[1] Eighth edition, p. 29. [2] P. 110.

psycho-physical interaction a more readily conceivable hypothesis.

Assuming the possibility of interaction between body and mind, we may regard an instinct, structurally considered, as consisting of a disposition, or neurone pattern. This total disposition must consist of three parts, or subsidiary patterns, which are functionally connected. The functionally central one of these is that the stimulation of which creates the expectation of a certain line of purposive activity. This central part we must assume to be connected with other subsidiary patterns on the receptor and effector sides, the former being the neural medium through which it receives its stimulus from the sensory areas of the brain, the latter being the motor pattern through which the expectation thus aroused tends to work itself out. With this in mind, then, we may develop our final definition of instinct. But it must be remembered that " an instinct " is an abstraction, and that the term refers merely to a supposed fact of the physical structure of a creature which tends to have certain effects upon its conscious experience and behaviour. An instinct, then, is an innate neural structure which, by determining the meaning of a certain group of presentations to include the expectation of certain purposive behaviour, directs the attention of the individual to those presentations and impels it to a certain purposive line of activity with regard to the object presented.

CHAPTER III

EXPECTATION

We have said that "expectation of an activity normally initiates that activity." This fact is of fundamental importance for the explanation of the mental dynamic which we are here developing. We have shown that meaning is the guiding factor in instinctive activity. We have also seen that meaning consists largely of expectations—expectations of activity and of the experience which accompanies such activity, and expectations of the experiences which may result from contact or other relationship with the thing that has meaning. But this reduction of a large part of meaning to expectation is of no value for the further understanding of the sources of behaviour unless we can also demonstrate the existence of a real causal connection between expectation and activity. Fortunately adequate proof of this is available, and for it we turn first to the phenomena of suggestion and autosuggestion. We shall find that the explanation of these phenomena is to be found neither in any mysterious "ideomotor force," nor in any still more inexplicable "subconscious mental energy," but in the simple fact of everyday experience that action, and even physiological process, tends to follow in the line of expectation.

Public interest in suggestion has been specially stimulated in recent years by the work of M. Coué, and, though his own explanation of the success of his method was very different from that which we have suggested, his work nevertheless will afford us precisely the material we need for our argument. His success as a healer is incontestable. He has to his credit a long list of cases, not merely of functional but also of organic disorders, in which he has

secured a cure or at least a notable improvement. His method was worked out in the course of a long experience, first with hypnosis and later with suggestion in the waking state. Its very success shows that, for its purpose, it was on the right lines, even though the theory brought forward to explain its effectiveness is entirely untenable.

Coué aimed first at convincing the patient of the value of suggestion and of the fact that the power which brings about the apparently miraculous results seen at the clinic resides in the sufferer himself, and in himself alone. "You have come here," he would say to his patients, "in search of someone who can cure you. You are on the wrong track. I have never cured anyone. I merely teach people to cure themselves. I have taught many people to cure themselves, and that is what I am going to teach you." [1] He had about thirty people at each sitting, and always included some who had been to him before, some, in fact, who, already convinced of, and accustomed to, the power of suggestion, were well on the way toward complete healing. These testified, in response to Coué's questions, as to the benefits they had received. On them he demonstrated the influence of suggestion by putting them first through some experiments in contracture of the muscles of the hands. The subject, in these experiments, is told to clasp his hands very firmly and to think that he cannot unclasp them. The experimenter meanwhile insists that he cannot. If the experiment is properly conducted, and the subject sufficiently susceptible, he may then be told to try to unclasp them and, so long as he continues to think "I cannot: I cannot," will find himself unable to do so. Coué used this experiment first with his practised patients and then with the novices, and rarely was it unsuccessful. His reputation, and probably his personality, account for

[1] Baudouin: *Suggestion and Autosuggestion.*

the more than usual success which he achieved with it. In this way his patients were convinced of the power of suggestion, were made ripe for the reception of the assurances of cure which M. Coué gave them, and were ready to persist, with considerable faith in the use of his method. It was Coué's practice then to proceed to make, in general terms, suggestions of health to the group who formed the sitting. For this purpose they were told to close their eyes and attend to his words. The suggestions were given in a soothing monotonous tone, but with a ring of certainty. The patients were then told to open their eyes and were carefully instructed in the use of "autosuggestion." The formula for this is well known: "Day by day, in every way, I am getting better and better." This, said Coué, is to be repeated fifteen or twenty times with the emphasis on the phrase "in every way," every morning before rising and every evening before going to sleep.

In all this performance, it is plain, the first effect aimed at is to produce in the patient an *expectation* of improvement. On our theory it is this expectation that actually brings about such cures as result. The faith-healers and miracle-workers of the past and present have also secured their successes by arousing an expectation of cure. Their methods of securing that expectation have been various, often spectacular, and always impressive and suited to the minds and beliefs of their subjects. Prayers and liturgies have been their special stock-in-trade. Coué came to a people who believe in science, and whose interest was intrigued by hypnotism and psychology. He developed a "liturgy" with a "scientific" argument behind it. His own faith helped to create faith and gave him success. That success created greater faith and spread the power of his "liturgy" to arouse an expectation of cure. His remarkable success is one among many demonstrations of the very real power of mind over physiological process

and of the fact that bodily movement tends to follow in the line of expectation.

That this is so seems to be made only the more evident by a study of the "laws of suggestion"[1] into which Baudouin has analysed the conditions under which such results are produced. These are: 1. "The idea which tends to realize itself in this way [i.e. suggestively] is always an idea on which spontaneous attention is concentrated." This he calls the "Law of Concentrated Attention." 2. The "Law of Auxiliary Emotion."—"When, for one reason or another, an idea is enveloped in a powerful *emotion*, there is more likelihood that this idea will be suggestively realized." 3. The "Law of Reversed Effort."

"When an idea imposes itself on the mind to such an extent as to give rise to a suggestion, all the conscious efforts which the subject makes in order to counteract this suggestion are not merely without the desired effect, but they actually run counter to the subject's conscious wishes and tend to intensify the suggestion." The fall due to vertigo is an excellent example of this. The more carefully the climber tries to maintain his balance, when once the fear of a fall has taken possession of him, the more unsteady does he become. His whole effort is directed against falling, but its result seems only to bring about the very catastrophe he strives to avoid. 4. The "Law of Subconscious Teleology."—"When the end has been suggested the subconscious finds means for its realization." By this is meant the fact that there is no need for the user of suggestion to suggest the means whereby the end is secured. One person suggests to himself improving health and the forces within his body are directed to the overcoming of whatever distressed conditions there may be within him. Another suggests to himself that sitting in a train with his back to the engine always makes him sick, and, when

[1] Baudouin: *Suggestion and Autosuggestion*, pp. 114 ff.

forced to sit under those conditions, automatically and unerringly the forces within the body are directed to creating feelings of nausea.

Not only in the first law, but in all of them, the fact most emphasized is that what is essential to the realization of an idea is the concentration of a certain exclusive attention upon it. From this relation between attention to and realization of an idea Baudouin concludes that the doctrine of ideo-motor force must be accepted as sound—that an idea attended to, *ipso facto*, has power to realize itself in action. This, however, is very questionable. But what seems incontestable is that an expectation of an activity or physiological process certainly does manifest this tendency. Now, expectation involves spontaneous attention. It is therefore necessarily the case that, as Baudouin discovered, " the idea which tends to realize itself . . . is always an idea on which spontaneous attention is concentrated."

The " law of auxiliary emotion " is only a special case of the " law of concentrated attention." The idea " enveloped in a powerful emotion " is always one on which attention is strongly, and usually exclusively, concentrated. If that idea be one of some possible action or physical process, then the power of the emotion will be the greater according to the vividness and certainty of the expectation of that action or process. In such cases it is the expectation that causes both the emotion and the realization of the idea. The observed connection between strength of emotion and certainty of realization is not a causal one. Indeed, Baudouin does not claim that it is causal, but merely states the concomitance of the two facts, both of which are, as we now see, concomitant results of the degree of expectation.

The " law of reversed effort " also finds its explanation in the facts connected with expectation. No effort is made to combat the realization of an idea unless its realization

is to some extent expected. The stronger this expectation, the greater the effort made to prevent it, but nevertheless the more swiftly the undesired result tends to occur. Take Baudouin's case of the novice on a bicycle.[1] He sees a stone in his path and because he expects to strike it he tries to avoid it, but moves straight on to it nevertheless. The expectation of directing his machine on to the stone has caused him to do so. If the effort to avoid doing so contributed anything to the result, it only did so by reason of the fact that it concentrated attention in the contrary expectation. Or take the case of the person who tries to cure himself of a sickness by voluntary concentration on the idea that he is getting well. He can only do so so long as he believes that he is ill and believing himself ill he *expects* the symptoms to continue. The consequence is that they do so in spite of, and in a certain sense because of, the reverse effort of concentration that is made.

The "law of subconscious teleology" expresses a fact which contains a mystery, the mystery of the connection between body and mind. This is covered in Baudouin's statement by the metaphorical phrase "*the subconscious finds* means for its realization." This law contains the central fact of suggestion, that of the connection between the thinking of an end result and the initiation of the activity which will realize it. But, as we have seen, the end result must be thought as possible; it must be expected. It is not necessary, however, and this Baudouin's law emphasizes, that all the intermediary processes should be thought of and expected. These may all take place unconsciously. How this has come to pass we shall consider later. Also such attempt as we can make to clarify the mystery of the connection between mind and body must be postponed to a later stage of our argument. The important result at which we have arrived, however,

[1] Baudouin: *Suggestion and Autosuggestion*, p. 116.

is that effective suggestion is simply expectation at work, and this enormously strengthens our contention that the normal result of the expectation of an activity is the initiation of that activity.

Further support for this theory—and also for its converse, that willed activity cannot take place unless it is expected —is to be found in the experimental study of fatigue. Fatigue is often studied in psychological laboratories by the use of a mechanism called the ergograph. The hand is strapped in this and a weight attached by a string to the finger. This weight is lifted by flexing the finger, and when lifted a certain distance the machine gives a click. When the weight is thus lifted a number of times at regular intervals the finger at length becomes so exhausted that it refuses to flex any more. The subject makes the effort but no movement follows. But if, immediately this point has been reached, before time has been allowed for the finger to recover even momentarily from its fatigue, the nerve to the muscle which moves the finger is stimulated, the finger will flex again. And it may be thus made to continue to flex a considerable number of times. The stimulus usually used is a weak electric current, applied to the skin below the arm, near the armpit, a point where this nerve passes close to the surface. This current does not add power to either nerve or muscle ; it merely stimulates the nerve ; pinching the nerve would have the same effect. The fact that the finger continues to react, therefore, shows that it is neither the nerve, nor the nerve-ending, nor the muscle that is fatigued when the willed movements become no longer possible. Fatigue has set in at some point behind the nerve to the muscle. If the fatigue is purely physiological, it must be in some higher synapse in the chain of neurons concerned in the movement.

But the fatigue is not *felt* in those higher regions of activity. It is felt in the muscle which moves the finger

and in areas surrounding that muscle. Examination of the muscle and nerve-ending would show exhaustion of essential supplies and accumulation of poisons which are the cause of that feeling of fatigue. Yet the exhaustion and poisoning, as the experiment shows, are not so complete as to make impossible any further movement. They are, however, sufficient to create a very unpleasant conscious experience. With the continual flexing of the finger the subject has become increasingly conscious of fatigue—at length painfully conscious of it. The effort of will necessary to continue the action becomes greater and greater. The subject longs to stop the painful process, but doggedly keeps on until at last the finger fails to move. Why? Not because he can no longer will to move it; he does so, but it fails to respond. Neither is it because the nerve, nerve-ending, or muscle is exhausted, for under artificial stimulation they continue to react. The only reasonable explanation that seems to be left is that it is because the subject no longer *expects* a response. His finger feels so utterly tired that he makes the effort without hope of success. Voluntary effort takes place; the physiological mechanism for the movement is adequate; but because no action is expected none takes place. Not only, then, do we find that movement normally tends to follow upon the expectation of it, but also that unless the movement be expected it does not occur even though it is willed.

Still plainer do these facts appear when we consider the effects of hypnotic suggestion upon capacity for action. An excellent example of this is given by Dr. Hadfield.[1] He had three men test their strength by gripping a dynamometer, first in the normal waking condition, then under hypnosis after it had been suggested to them that they were weak, and thirdly after they had been given, still under hypnosis, the suggestion that they were very strong. In each

[1] Article in *The Spirit*: B. H. Streeter (Ed.).

case they were told to grip the instrument as tightly as they could. The result was that in the normal waking condition the men produced an average grip of 101 lb.; under the suggestion of weakness they produced an average of 29 lb.; under the suggestion of strength the average grip rose to 142 lb. Here then the strength which three men could put forth was reduced by two-thirds because they thought it was reduced. It was increased by nearly one-half because they thought it was increased. The actual potential energy of the muscles must have been the same in each case. But when they did not expect as great an output of strength as usual, then, even though they tried just as hard, the output was considerably lessened. On the other hand, when they expected a greater output than usual, behold! it was realized.

But why, we may ask, was not the conscious willed effort of the men in their normal condition able to realize the maximum output of strength of which hypnotic suggestion showed them to be capable? The previously mentioned experiment on fatigue suggests an answer. There we saw reason to believe that willed movement became impossible (although the capacity for movement still remained in nerve and muscle) because the feeling of fatigue made the subject believe it was no longer possible. Here, in the case of the gripping of the dynamometer, it would appear that when the feeling of strain of the grip reached a certain pitch (although the maximum output of energy of which the muscles were capable had not been reached) the conviction arose that they could grip no harder; and so, because no further increase was expected, though the effort was made, no greater exertion was possible. In each of the three cases, therefore, it would seem, the course of the activity was controlled by expectation. The expectation that a movement will be performed tends to produce that movement. The expectation that it

will not occur makes it impossible deliberately to perform it. The expectation that the output of energy shall be great or small tends to determine the power available accordingly. At all points, therefore, activity seems to depend, among other factors—those connected with the efficiency of the physical organs—upon expectation.

These conclusions can be still further reinforced by the study of pathological cases and of actions performed under stress of great emotional excitement. The Great War produced a large crop of cases of people who suffered from some functional disability, and who were cured simply by talking to them and demonstrating that there was nothing organically wrong. So long as a man thought he was dumb or paralysed or blind, he remained so ; but as soon as he was persuaded that he was not (e.g. by being made to talk, walk or see under hypnosis and then told to remember doing so on waking up) his difficulty disappeared. Further examples need not be given here, for we must return to this subject when we come to the discussion of the problem of the unconscious. Such simple cases as we have referred to, however, are sufficient to reveal the importance of the rôle played here also by this factor of expectation. We will pass on to refer to the effect of great emotional stress upon output of energy and to show that this too can be explained as an effect of expectation.

Under great emotional stress, it has often been observed, people are sometimes capable of doing things which are quite beyond their normal powers. McDougall tells of a well-known athlete who, when a boy, was chased by a dangerous animal and leaped a fence which he was never afterwards able to " clear," even as a grown man and after years of athletic training. Baudouin tells of a paralysed woman who, living in the fifth storey of a building in Paris, during an air-raid found herself in the porter's lodge without knowing how she had got there. A bomb had

exploded near by and she had incontinently fled downstairs, though such a feat was entirely beyond her when in a normal frame of mind. Hadfield tells of a woman whose son and husband were working at a munition factory. One night a great explosion occurred at this factory and the wife and mother, after a hard day's work, rose from her bed and ran practically the whole distance of seven miles to the scene of the accident in an incredibly short time.

Such examples could be multiplied almost indefinitely. What is the explanation of them? It has been suggested that action depends on two kinds of energy, mental and physical, and that strong emotion brings a great access of mental energy, either because emotion *is* mental energy or because in some way it taps it. Ordinarily, on this theory, mental energy is exhausted first, leaving a considerable amount of physical energy in reserve which is only called up when, with a strong emotion, there comes a great access of mental energy to co-operate with or direct it.

But if we take into account what we have already learned of the place of expectation in the initiation of activity, there is no need for any such hypothesis. The tendency of emotion is to concentrate attention upon a single end to the exclusion of every other idea—especially every contrary idea. Under a great access of fear the person usually can think of one thing only—escape. Difficulties are forgotten. There is but one end and one line of action that enters consciousness. The performance of that action and the achievement of that end is therefore expected—for the person thinks of nothing else—and because it is expected it tends to occur. Fatigue, strain, ideas of impossibility are not allowed to enter consciousness to arouse expectations of a limit to physical capacity and of failure to do more. So the utmost physical strength possessed by the individual is called forth. That which ordinarily is impossible is expected—and therefore it happens.

This mass of evidence, drawn from such a variety of phenomena, would seem sufficient to prove our contention that "expectation of an activity normally initiates that activity." Indeed, it has gone further than that. We have seen reason to believe that deliberate action, at least, is impossible unless the action be expected. Even impulsive actions and unconscious physiological processes we have found to be affected by expectation. So far as consciousness initiates, modifies or inhibits activity the element in consciousness which actually does this appears to be expectation. It may be that such expectation is explicit—the end pursued clearly understood—as in deliberate action; or the end may be only vaguely implicit in an expectation which moves short-sightedly from one brief line of activity to another, as would seem to be the case in most of the instinctive reactions of the lower animals. But in either case it is the particular expectation which forms part of the conscious experience, rather than the feeling or any other part of it, which is the actual controller of conscious movement.

Of course, it is still open to the mechanist to deny that expectation (as a fact of consciousness) really has anything to do with it at all. He may assert that expectation is a mere concomitant or epiphenomenon of certain complex brain processes, that these brain processes are the real cause of the activity and the conscious experience a mere accompaniment which has no more effect on the physical process than has the noise of the explosion on the flight of the bullet. But though he may assert this he cannot prove it, and he has left on his hands the problem of accounting for the concomitant occurrence of conscious process. This, however, is not the place for any further discussion of this problem. We have observed a series of relations between expectation and activity of a kind which the scientist ordinarily accepts as indicating causal

connection. For the present we shall assume that this connection is real and not merely apparent. Later, we shall endeavour to support this assumption. Also, at a later stage, we shall bring forward evidence which indicates that all activities, even unconscious and purely physiological processes, have originally and indirectly been initiated in acts of conscious expectation.

Now at times this factor of expectation is experienced with the impelling force of an urge. It becomes thus urgent if repressed, because the tendencies initiated by the later expectations are reinforced by certain continuing after-effects of the earlier ones. It acquires urgency, too, if previous experience, or the innate structure of an instinct, has made urgency a part of the meaning of the presentations which have aroused it. What we have described, therefore, as the " urge of life," in so far as it is aroused and directed by the structures of instinct, is disclosed now to be simply the urge of expectation. As we pursue the subject further we shall find that a more far-reaching statement becomes possible : we shall be led to the conclusion that expectation *is* the urge of life, and that a forward-looking teleological consciousness is the ultimate fact of existence.

CHAPTER IV

THE SOURCES OF ENERGY

We have seen that the expectation which is experienced as a felt urge to activity may be aroused by the stimulation of an instinct. Even the expectation or urge which plays a part in deliberate action or pathological phenomena, it must be admitted, may usually, if not always, be traced directly or indirectly to the functioning of some instinct or instincts. This leads to the suggestion that all expectation, that is, the whole urge of life, is due to the working of the instincts. This is the view adopted by McDougall, who declares: "The instinctive impulses determine the ends of all activities and supply the driving power by which all mental activities are sustained. . . . Take away these instinctive dispositions with their powerful impulses, and the organism would become incapable of activity of any kind; it would lie inert and motionless like a wonderful clockwork whose mainspring had been removed or a steam-engine whose fires had been drawn. These impulses are the mental forces that maintain and shape all the life of individuals and societies, and in them we are confronted with the central mystery of life and mind and will." [1]

This, however, seems to me to be a serious overstatement of the importance of instinct. Instinct is not the whole of life. The mind is not merely a bundle of separate instincts. For the solution of the "central mystery of life and mind and will" we must go behind instinct to find a life movement which is primitive and fundamental. The inadequacy of instinct as an explanation of "the mental forces that maintain and shape all the life of individuals

[1] *Social Psychology*, eighth edition, p. 44.

and societies " becomes manifest at two points in the study of behaviour: first, in regard to what we may call the recreative activities of man and many animals; second, in connection with the highest moral thought and conduct of man. The first of these deficiencies we shall discuss here. The second we shall endeavour to make clear when dealing with the instincts and ideals in the following two chapters.

We have already emphasized the fact that activity is a necessity to every creature that lives. The intolerable restlessness created by a prolonged period of deliberate or enforced inactivity is not merely due to the clamouring of appetite or the recurrent stimulation of instinctive desires; for it is commonly a restlessness or urge that can find satisfaction in almost any form of activity. The patient laid on his back and unable to read counts and re-counts the notches in a wooden ceiling or the flowers on the wall-paper. The prisoner of no literary interest scribbles doggerel with a candle on the wall of his cell. In these activities it is not merely that a modicum of curiosity or of self-assertion finds satisfaction, but to some small extent the *man* finds satisfaction because he has found something to *do*. The activity is not merely the response of a certain instinct to a stimulus. It is the expression of the inevitable urge of life in one of a very few lines of activity left open to it. The same is true of most of the activities which bear the distinguishing mark of play.

Play presents a psychological problem which seems to have given McDougall a good deal of trouble. It will not fit into his theory of instinct as the dynamic of all human action. We have already discussed, and dismissed, the theory which attributes play to the overflowing of superfluous nervous energy—physical energy. In his earlier work, *An Introduction to Social Psychology*, McDougall rejects this theory and adopts a modification of Groos's view that

play is the expression of the various instincts—combative, food-hunting, etc.—prematurely ripened in order to give practice in the movements necessary to the accomplishment of their ends before the time comes for those ends to be pursued with serious intent. In his later work, *An Outline of Psychology*, he seems to give up this theory, even in the modified form previously adopted, and goes back to the formerly rejected theory of play as due to "a surplus of nervous energy,"[1] but without making any attempt to answer the objections which he had then urged against it.

With McDougall's criticism of Groos's theory we fully concur, and we cannot do better than quote his discussion of it in order to show the real difficulties of the problem.

"Professor Groos's well-known theory of play asserts that it is essentially the exercise of instinctive modes of action, for the sake of development and improvement of skill in movement. We have recognized that youth is essentially the period of accumulation of experience before the instincts are mature. But there are difficulties in the way of Groos's theory. We have to ask: Is there a special instinct which impels to this kind of exercise and somehow modifies the behaviour proper to each instinct? If only young animals played, the problem would be simpler, for then we might suppose that the several instincts which find expression in play are incompletely developed, and that the incompleteness of the instinctive reaction is due to this immaturity. But this will not do. For sometimes mature animals play; as, for example, a grown dog with a puppy. The problem appears most clearly, if we consider the special feature of dogs' play which consists in one biting the other. The problem is: How are we to interpret the fact that, in such playful fighting, the biter never drives home his teeth; while the other often makes no effort to escape or defend himself, but, rather, lies on his back, presenting his

[1] *Outline of Psychology*, p. 71.

undefended throat and belly to his fellow, in a way he will never do in real combat? Clearly, if the combative instinct is at work, it is working in a strangely modified fashion. Further, it is clear as daylight that the combative emotion, anger, does not accompany these activities. Playful struggling may readily turn to real fighting; but as soon as one of the players displays anger, the play is at an end, giving place to real combat, or, at least, to the preliminary threats. Thirdly, the circumstances which evoke the impulse and emotion of the combative instinct are lacking in play. Neither dog is pursuing an instinctive goal; and therefore there is no impulse at work the thwarting of which would provoke anger. The same is true of the playful actions which seem to be expressive of other instincts. The one dog flees and the other pursues; but the fleeing dog is not really striving to escape, and shows no sign of fear. And the pursuer is not really hunting him; does not attempt to seize him and devour him if he comes near him; does not yap as he would if pursuing game; and he experiences, we may feel sure, little or none of the emotional excitement proper to the hunt." [1]

It is certainly true that in the more developed forms of play we can discern various instincts at work. In her play with her dolls the incipient maternal instinct of the little girl is finding expression. In his volume of stamps the collecting instinct of the boy obtains satisfaction. Curiosity is the motive of a host of playful activities and self-assertion of a still larger number. But there is a more primitive type of play exhibited by both children and young animals which is mere aimless gambolling, purposeless, the expression of no particular instinct, mere activity for activity's sake. Indeed, this is *pure* play. In so far as play has any other end than the activity itself it partakes of the nature of serious activity, instinctive striving or work.

[1] *Outline of Psychology*, p. 170.

The young animal or child plays, not because an impulse of rivalry or a prematurely ripened food-hunting instinct or constructive instinct impels it to play, but simply because it is *alive* and because so long as it *lives* it must *act*. Play is not some particular instinct expressing itself; neither is it superfluous physical energy finding release; it is the sheer outpouring of life itself. The bounding life within the young, having no call to serious pursuits, seeks expression in the use of those neural motor mechanisms, already partly developed, which will later be the instruments of its instinctive activities. This impulse to activity finds its complete satisfaction in mere activity. The puppy playfully fights and hunts and runs because that is the activity which its nervous system is best adapted to, and which, therefore, it finds easiest and most attractive and satisfying. There is no anger and therefore no impulse to hurt. On the other hand, there is a certain affective attitude towards its playmates, due ultimately to the parental instinct and the instinct of kind, or herd instinct, which is sufficient to prevent the activity engaged in from being carried to the extreme of such hard biting or scratching as to injure its fellow.

In an earlier chapter we stated that play indicates that some power from within the creature, other than mere superfluous physical energy, and also something from outside calling forth this activity, must be recognized as factors in play in order to find its complete explanation. The " something from outside " is the object which stimulates those instincts which, as we have seen, find some expression in many of the activities commonly regarded as play. The " power from within " we have concluded to be the urge of life itself.

With this view of play McDougall, in his *Outline of Psychology*, is in agreement, except as to the nature of that urge which we have concluded to be its dynamic. In

answer to the question as to whence comes the energy that sustains the "activity for its own sake" of play he uses words that might have been written by Herbert Spencer: "The well-fed and well-rested animal, especially the young animal, has a surplus of nervous energy which works through the channels of the various motor-mechanisms." [1] It is evidently not quite the Spencerian doctrine that McDougall has in mind, however, for he concludes the paragraph with the final explanation: "It is the primal *libido* or vital energy flowing not in the channels of instinct, but overflowing, generating a vague appetite for movement and finding outlet for any or all of the motor mechanisms in turn."

With this latter statement we would be inclined to sympathize were it not linked with the former. The "primal libido or vital energy" seems to be regarded as nothing more than the "surplus nervous energy" [2] of the "well-fed and well-rested animal." This being the case, it is difficult to see how McDougall can distinguish his newer theory from the Schiller-Spencer doctrine he so lustily attacked in his *Social Psychology*. That doctrine we have already discussed, and shown our reasons for regarding it as unsatisfactory. The last-quoted statement from McDougall, however, seems to indicate that he has in mind that theory of vital or psychic energy, manifesting itself in the urge of the instincts, which has been adopted from Freud and Jung and has provided the key-word of the "new" psychology.

This theory of Libido has been stated with so many variations that it would lead us too far from the thread of our argument to enter on a full discussion of them. We are concerned now with the question whether the instincts

[1] W. McDougall: *Outline of Psychology*, p. 171.

[2] Cf. McDougall's theory of "neurokyme" in his *Outline of Abnormal Psychology*.

are the ultimate sources of the urge of life. We have seen that play cannot be attributed to the ordinary working of any one instinct or of different instincts. It has been suggested that it is due to " the primal libido . . . flowing not in the channels of instinct, but overflowing, generating a vague appetite for movement." If it is meant that this " primal libido " comes from some source outside the instincts and, having no call to flow in the defined channels of instinct, pours itself direct (to maintain the figure of speech) into the channels of motor activity, then we have here a source of activity other than the instincts ; and, if our argument against regarding this as surplus nervous (physical) energy be accepted, then our contention must be admitted that in play we see manifested that *urge* of life the distinguishing feature of which is expectation, and which must therefore be regarded as psychical. But it is more likely that McDougall regards this surplus energy as overflowing from the instincts themselves, the instincts being the source of the energy, but not directing it in their normal channels of expression because of the absence of the experiences appropriate to stimulate them. That this is his view is indicated by a statement made in discussing the theories of the source and seat of storing of the energy of the instincts. As the first possible theory, he suggests, " We might regard each instinct as containing a store of potential energy, which is liberated and directed into the appropriate channels when the instinct is excited, *and which leaks or overflows in that restlessness which we have seen to be characteristic of Appetite.*" [1]

" An appetite is apt to manifest itself [in certain instincts] in the absence of the key, the specific object [the appropriate stimulus of the instinct], in a more or less vague restlessness. . . . It is as though the spring of energy which drives, or actuates and sustains, the train of activity of each phase

[1] W. McDougall : *Outline of Psychology*, p. 107. (Italics are ours.)

of instinctive action were liable to bubble over among the motor mechanisms and to keep them in random activity, until the animal encounters the specific object; this object alone can direct the energy into the courses proper to the securing of the instinctive goal, by unlocking the door and allowing the overflowing energy to escape in the appropriate channels." [1]

When McDougall suggests, therefore, that play is due to the " primal libido . . . overflowing, generating a vague appetite for movement," we may assume that he regards the surplus energy which finds expression in play as a surplus or leakage, due to the over-accumulation of energy within the instinct, flowing out into channels of motor expression without being directed necessarily upon the ends of the different instincts from which it flows and without evoking the emotional experiences peculiar to the excitement of those instincts. This theory of instinct as the source of Libido, or what we have described as " urge," is widely held. So also is the view that an instinct, left for long unstimulated, must accumulate surplus energy after the manner of what McDougall calls " appetite." For a clear and definite statement of this psychological position we cannot do better than refer to Professor Tansley's widely read work on *The New Psychology*.

" The principal instincts of the mind normally demand constantly repeated satisfaction, in so far as all the available energy is not absorbed in some integrated higher conation in the service of which the instincts are harnessed, and upon which the whole attention of the mind is concentrated. So far as that is the case there is no room for the independent demands of the individual instincts. Such an ideal subordination and use of instinct is, however, very rarely complete, and so long as it is not complete the instincts continue to demand independent satisfaction. These

[1] *Outline of Psychology*, p. 102.

demands take the form of what may be called *recurrent conations*. When the Libido has gained its immediate end in action, the mind is temporarily satisfied and at rest, but the energy inherent in the living complex will shortly accumulate afresh and again seek an outlet; and so on indefinitely. The strength of the demand will vary at times according to the waxing and waning of the energy of the particular complex involved: in some cases the instinct concerned may notably weaken in strength, or almost atrophy, with advancing years, as is sometimes, though not always, the case with the instincts especially associated with youth, such as the sex instinct and the combative instinct. But apart from such fluctuation and decay the individual instincts, working through the corresponding complexes, will demand perpetually renewed satisfaction. The tension developed in a complex by the accumulation of energy is released when the energy is discharged and the conation is completed in action. A state of equilibrium is momentarily obtained, with the accompanying feeling of satisfaction. But this satisfaction is transient. As energy accumulates afresh the tension again develops in the complex and presses for discharge." [1]

If this view of instinct, which is implied in McDougall's discussion, and thus clearly stated by Tansley, be adopted, then the question of whence comes the energy manifested in play and accumulated in periods of idleness—the energy of recreative activity, activity for its own sake—no longer presents a difficulty. It is obviously the surplus energy of instincts that have been for some time unstimulated. But the solution is not so simple. This view of instinct, plausible though it may at first appear, and widely though it is to-day accepted, is contradicted by the facts of life and has nothing to support it which cannot be otherwise and more satisfactorily explained.

[1] Tansley: *The New Psychology*, p. 70.

The statement that " the principal instincts of the mind normally demand constantly repeated satisfaction " is perfectly true, but the reason for it is that, normally, they are all constantly being stimulated. The belief that they demand satisfaction even when not stimulated is due to the misunderstanding of the factor which McDougall calls " appetite," to the misinterpretation of some expressions of instinct, and to the failure to take into consideration certain sources of stimulation which are not obvious.

Appetite is affected by various physiological conditions ; in particular, by certain glandular secretions. Some instincts, particularly sex and the food-seeking impulse, manifest a periodicity which is obviously due to these physiological causes. But the biochemical results of an empty stomach, the tension of a fully charged seminal vesicle, and the presence of hormones or endocrenes in the blood constitute stimuli to certain instincts, causing them to react in a certain way, in precisely the same sense as does the sight of a mouse to a cat, or the strutting of a peacock to a peahen ; though the latter type of stimulus may cause the same instinct to react in a somewhat different way.

Appetite may also be increased by the frequent stimulation of the instinct without its obtaining full satisfaction. There is no need to suppose that this indicates that an energy aroused in the earlier experiences of stimulation, but not expended, is stored up and pressing for release, adding its power to that evoked by the later stimuli. We shall see that physiological processes initiated in an act of expectant attention and then dismissed from consciousness, but not negatived, continue to work themselves out unconsciously. When an instinct is aroused but not satisfied there must be many such processes left in activity. These processes continue to act as stimuli, for they must tend constantly to draw attention to the instinctive desire. The result is

that the stimulus grows stronger with each succeeding defeat of the impulse, and the stronger the stimulus, the stronger the response becomes. It must never be forgotten that thoughts and images of a desired end are, especially in man, among the most frequent of instinct stimuli.

It is mainly because of the effect of a frequent stimulation and denial of an instinct that repression and suppression appear to add power to the instinctive response. But this effect, which Tansley and others believe to be due to the gradual accumulation of instinctive energy when it is allowed no outlet, can, as we have seen, be otherwise explained. It therefore gives no support to the theory. Further, there is yet another fact which, in some cases, helps to explain the violence of the response which ends a period of suppression. Opposition to the ends of any impulse arouses anger. The memory of previous opposition further stimulates the anger occasioned by each successive denial. Thus at length the individual is spurred into violent response by the overwhelming stimulation of two instincts instead of one. Thus does suppression build the fires under the boiler.

If it be true of any of the instincts that they cause the gradual accumulation of energy until it leaks out or bursts through despite the lack of stimulation, then we would expect it to be true of all. Let us test the theory on the instincts of escape and pugnacity. According to this view, these instincts, during a period of quiescence, must gradually charge with energy their corresponding complexes, creating in them a condition of tension; and "as energy accumulates afresh [after satisfactory expression] the tension again develops in the complex and presses for a discharge." We should expect then that the person who goes through a whole year without meeting any experience to arouse his fear should, by that time, have a fear complex

at bursting point, ready to fling him into a paroxysm at anything or nothing. Or the fortunate man, who meets with nothing that arouses his anger during a period of months, should, on this theory, accumulate a pugnacious energy sufficient to drive him to strike the first passer-by on the nose without waiting for provocation.

Obviously the theory does not hold of the instincts of pugnacity or escape. Nor does it fit any better when applied to the other "ego instincts," such as repulsion, curiosity, self-display. Even if the theory were limited to the three "great complexes," which Tansley distinguishes, taken as whole, it is no more satisfactory. These complexes are those of the Ego, Sex and Herd, and are said to derive their energy from the corresponding instincts and groups of instincts. Now, we have seen that the periodicity of sex impulse which seems to fit in so well with the theory, can be better explained on other grounds: owing to physiological circumstances the stimuli gradually increase again in strength after each satisfaction. What of the ego and herd complexes?

The instincts commonly grouped together as ego instincts are those which serve the purpose of the preservation of the life of the individual; they are concerned with his nutrition and protection. It may be that they have all been developed in the exercise of a primitive impulse tending toward self-preservation. But if so they are no longer dependent on that impulse. Self-display, anger and curiosity may sometimes overcome fear or the food-seeking instinct. All these instincts are now quite as independent of each other as are the instincts of herd and sex. There is no general impulse toward the preservation and assertion of the individual springing directly from any one instinct. Nor is there even any such tendency, arising from a "complex" based on a group of "ego instincts," which manifests the periodicity, apart from stimulation, which

Tansley declares to be a characteristic of every complex. Even if the instinct of self-assertion be regarded as the core of the ego instinct, it still fails to reveal a gradual accumulation and eventual discharge of energy except under conditions of constant stimulation.

Of all the instincts perhaps the herd instinct seems to adapt itself best to this theory. A period of loneliness creates a craving for society which tends to grow stronger and stronger. On the other hand, a prolonged association with a numerous fellowship creates a satiety of company, and after such an experience most people are glad to escape for a time from the crowd. But only for a time; the longing for human associations gradually grows again until it draws the individual back once more to lose himself in the group.

It is not surprising that this obvious periodicity of the herd impulse should have been regarded as indicating a gradual accumulation of energy which at length expends itself in driving the individual to become one of the herd and which, having expended itself thus, ceases to operate strongly and thus allows other instincts to draw him away in pursuit of other interests. Can this periodicity be reconciled with our theory that an instinct only affects behaviour when stimulated by the perception (and in man often by the conception) of its appropriate object?

On our theory, which will be more fully developed in the next chapter, the herd instinct is primarily stimulated by the perception (through sight, or sound, or smell) of the presence of others of the species. The resultant impulse is to become one of the group. In its most primitive expression this means merely to join it in physical presence. But, as the capacity to appreciate differences between an individual and a group grows, the instinct is not satisfied merely with making the individual become one with the group in physical presence. It demands unity

with the group in every quality which it discovers as distinguishing the group. The instinct is pained by the realization of any circumstance in which its possessor is out of harmony with the rest. Thus the herd instinct of man impels him to accept the opinions of his fellows, to enter into community of feeling and interest with them, and to adopt their habits and tastes even to such minor details as dress. It also drives him to seek to have his own feelings and interests shared by others and creates in him an intense loneliness if, when strongly moved, those around refuse to enter in to share the thoughts and feelings that have gripped him. On the other hand, his every joy is enhanced, his every sorrow alleviated, if he can but share it with some other.

If a man longs to be alone, it is not because he is satiated with the society of those with whom he has been completely at one, nor is it because the energy of his herd instinct is exhausted. It is because he is no longer completely at one with his company. Some desires have been aroused within him which he cannot share with his present company. Therefore he is no longer at one with them. Their presence now pains the impulse of herd rather than gratifies it. The very herd instinct itself impels him to leave this company which refuses to be at one with him. He is glad then to go away, to be alone, to occupy himself for a time with this new interest. But when the desire or interest which drew him away from the crowd has been fulfilled, and the mind is free to turn to other thoughts, then memories of his companions arise and act as stimuli of the herd impulse just as powerful as the sight of their faces or the sound of their voices ; or else the new interest which now claims his attention is one which he has in common with those companions, and the herd impulse clamours for it to be shared with them ; in either case he must perforce go back to the society he had left and find

in it the fulfilment of his being until some temporarily stronger interest again calls him away.

The periodicity of the herd impulse may thus be understood as due to factors of the same kind as those which are traceable in the working of other instincts. Its impulse to action only arises in response to stimulus. Those occasions when it seems to arise and gather strength in the absence of the usual stimuli are, as is often the case with other instincts, due mainly to memories of past experiences. That this is so even among the animals is indicated by a consideration of the common phenomenon of fretting among wild animals held in captivity. The "linnet born within the cage, that never knew the summer woods," does not fret. Yet its instincts are the same. If those instincts, which, in its confined life, must ever go unsatisfied, were constantly pressing for expression, as on Tansley's theory they should be, then we should expect every wild thing thus held to eat its heart out with useless fretting. But it is only the creatures which have known the larger life, wherein every instinct found its stimulus and expression, that fret against their bars and fail to respond to the stimuli to a milder and circumscribed activity which their life as captives presents to them. They fail because such memory as they possess retains the images of the more satisfying experiences and because their little souls are consumed within them by the impossible urges which memory stirs into being.

Appetition, then, is created either by recurrent physiological stimuli within the animal's own body or by the constant stimulation of an instinct by memory, or by some other form of frequent stimulation which provides no opportunity for satisfactory expression. There is no process of a gradual gathering of energy within the neural or mental structure. There is no superfluous energy laid up by instincts to overflow into other channels, forcing an

aimless activity. It is not from the instincts, therefore, that the energy displayed in play is drawn. The urge felt by the solitary prisoner to any form of action so long as it may break the unbearable continuity of idleness is not an urge springing from particular instinctive sources. This urge to recreational activity and the energy displayed in it are then, in themselves, proof that the instincts are not, as McDougall would have us believe, "the prime movers of all human activity . . . the mental forces that maintain and shape all the life of individuals and societies." [1]

The fact of play thus seems sufficient in itself to reveal the inadequacy of the theory which would regard instinct as the source of the urge of life. There is yet, however, as we have already stated, another important point in human experience where this theory breaks down; this is in the explanation of man's æsthetic, intellectual and, above all, moral motives.

Before proceeding, however, to the discussion of this further evidence of non-instinctive sources of activity it is important that we should point out that the decision we have come to—that the instincts become sources of urge only when aroused by their native or acquired stimuli—requires a complete reconstruction of the practical teaching of the "new" psychology regarding the "sublimation" of the so-called energy of the instincts.

On the theory that the instincts are each and all a kind of psychic dynamo, producing or accumulating energy which urges the creature to the achievement of their various ends, it necessarily follows that some outlet must always be found for all this energy. But it is disastrous for us to "follow our instincts" and give them all expression as they demand it. Yet, if the demand of the instincts be the pressure of accumulated energy, it must find an outlet

[1] W. McDougall: *Social Psychology*, p. 44.

somewhere. The fact that we do not all "follow our instincts" shows that this "energy" must often be drafted off into some other channels. It is this supposed diversion of the energy of one instinct to some alien activity that is called "sublimation," and on the basis of this theory the "new psychologists" have given much advice for everyday life and have built up pedagogical and sociological theories, while failure to sublimate is looked upon as a fertile cause of neurosis. Freud writes:

"We believe that civilization has been built up, under the pressure of the struggle for existence, by sacrifices in the gratification of the primitive impulses, and that it is to a great extent for ever being re-created, as each individual, successively joining the community, repeats the sacrifice of his instinctive pleasures for the common good. The sexual are amongst the most important of the instinctive forces thus utilized; they are in this way sublimated, that is to say, their energy is turned aside from its sexual goal and diverted towards other ends, no longer sexual and socially more valuable." [1]

If it were the case, as is here supposed, that energy is accumulated by the sex instinct and must be expressed either in sexual activity or in sublimated form, then we should expect to find that unmarried adults who are not immoral are, on the average, very much more active in artistic, intellectual and cultural circles and in societies for social service than are married people, for it is in such activities, we are told, that this sublimated energy usually finds its outlet. It must be remembered that the bachelor and spinster have, usually, much more time and money to be devoted to such pursuits than have those with family interests and responsibilities and, when allowance is made for these facts, a little consideration will suffice to show that the proportion of single people who manifest these

[1] Freud: *Introductory Lectures on Psychoanalysis*, p. 17.

interests is not as large as we should expect if the necessity of sublimating sex energy were driving them to such pursuits.

The theory, then, obtains no support from practical experience and, as we have already shown, is based upon a false psychology of the instincts. It is not necessary to sublimate the energy of the instincts, for they have no energy to be sublimated. They are not producers or accumulators of energy. They are structures which give meaning to certain presentations and thus create the expectation of a certain purposive line of activity which the organism forthwith tends to follow. They do not demand a constantly recurring satisfaction; they demand satisfaction when, and only when, they are stimulated by objective presentations; their function then is to direct attention to the end which those presentations make appropriate for the creature to pursue.

There are, however, some elements of truth in this view of sublimation which have led to its wide acceptance and have made its promulgation, on the whole, useful. Though it is not true of any particular instinct that it maintains a recurring urge to expression, it is true of life as a whole. This fact we have already emphasized. Because of this continually recurring urge some useful and innocuous occupation must be found to provide the individual with a means of expression, or the sheer necessity of doing something, reinforcing the natural impulse, will probably drive him into activity in response to the most insistent instinct stimulus. Thus it has become a proverb that " Satan finds some mischief still for idle hands to do."

Besides the motive power of this general urge of life, there are other stimuli to activity which require something akin to sublimation. So long as we live, certain instincts, particularly those of sex, herd and self-assertion, will be constantly stimulated by presentations from physiological

changes or the social environment and, being constantly stimulated, will as constantly demand satisfaction. This demand becomes more and more insistent through the initiating by these stimuli of tendencies toward the satisfaction of the instinct which are not allowed to proceed to fruition and yet, because welcomed by some part of the personality, are not entirely negatived and dismissed. These instincts do, therefore, present the practical problem of finding, as far as possible, suitable opportunity for their expression and, in so far as that is not possible, of discovering means of changing the nature of the expectations of activity aroused by their stimulation. Experience has proved that this is possible. By the power of strong sentiments the thoughts aroused by the instinct can be linked or associated with another train of thought so that attention is habitually turned from the one to the other and, if that other train of thought is the centre of a strong interest, attention may be held by it and the urge of the instinct thus overcome. It is this achievement of formed character that has lent colour to the theory of sublimation. In this way, it is probably true, the instincts, especially sex and the parental instinct, may become harnessed in the cause of art, culture and social service, not by lending energy to the motives to their pursuit, but by constantly directing the attention of the individual to them and by his thus finding in them a refuge from his lower self.

In its practical applications our theory will not differ much from that following from the typically Freudian view. We may agree that, as far as possible, legitimate channels of expression should be found for all our instincts, though we would not stress this point as much as the exponents of the " new " psychology are inclined to do. We would rather stress the point that useful occupation, directed by strong interests of a definite kind, should be found for

every individual. Where we most strongly disagree with the practical teaching which is commonly drawn from the theory of sublimation is in this : that we assert the possibility and the value of sheer moral restraint by means of turning attention to some other thing and forgetting the temptation.

CHAPTER V

THE NATIVE HUMAN MOTIVES

We must turn now to the second point at which the inadequacy of instinct as the sole explanation of the mental forces that animate human conduct is manifested. This we have said to lie in the explanation of our highest moral conduct. But before we can attempt to prove this thesis we must have before us a clear view of what our particular instinctive motives are. Further, these tendencies play such a vast and important part in our lives that no account of the human mental dynamic would be complete without a description of them in some detail. Our conduct is affected by instinct at all points. Indeed, it is true of nearly all the activity of our lives that that activity is actually *determined* by instinct and the habits which have grown up on the native instinctive basis. Every problem of conduct, be it individual or social, normal or pathological, is largely, and often ultimately, the problem of discovering the nature and organization of the instinctive tendencies which have been in operation. It is therefore of the first importance, both to psychologist and sociologist, to determine clearly what instincts we human beings have. And it is only after we have determined this, and seen to what types of conduct the different instincts impel, that we shall be in a position to say whether anything more than instinct is needed as the explanation of even our highest moral conduct.

On this question of the enumeration of the instincts there is a considerable amount of agreement, but also a good deal of disagreement among psychologists. Part of this disagreement is due to far-reaching differences in the

definition of instinct. But even where closely similar definitions are adopted differences appear, particularly in regard to what particular activities should be included in those to which the instinct impels. If we are going to build up a consistent and useful psychology of instinct, it is first necessary that we should have some clear criteria to guide us in deciding regarding any particular piece of conduct whether it is instinctive and to what instinct it belongs. These criteria we must, of course, derive from our definition.

Now we finally determined to define an instinct as "an innate neural structure which, by determining the meaning of a certain group of presentations to include the expectation of certain purposive behaviour, directs the attention of the individual to those presentations and impels it to a certain purposive line of activity with regard to the object presented." The two important facts about instinct that appear from this definition are: 1. That an instinct is something innate. 2. That it results in a certain purposive activity; i.e. impels the individual to seek a certain *end*, though, as has before been stated, that end may not be clearly envisaged. Instincts are innate sources of purposes or ends. It is therefore according to their ends that instinctive actions must be classified; each separate instinct must be distinguished by the end pursued. Further, it must be noted, the end which is the mark distinguishing one instinct from another is not necessarily the end which the biologist sees the activity to subserve, nor yet the action or achievement which merely forms, for the creature concerned, a step towards, or a means for, its satisfaction. It is *the end in which the conation finally ceases, the end-experience which satisfies the animal*, that must be regarded as the distinguishing mark of an instinct. The instinctive action is one pursued for its own sake. Its end, when achieved, is enjoyed in and for itself. This is the great criterion of

instinct. And it is this criterion that makes the notion of instinct valuable to the psychologist and the sociologist, for it affords information of the utmost importance. It tells us what things the man or animal naturally and inevitably strives to do, and in what activities and what results his satisfactions consist.

This criterion, once clearly and definitely adopted, will render possible the decision of many points of disagreement among psychologists on the classification of instinctive actions. For example, it has been questioned whether crouching to hide and running away should be regarded as the manifestations of two separate instincts or as two manifestations of one instinct. Since in both cases the end in which alone the animal finds final satisfaction is escape from danger, we must decide for the latter alternative and speak of them as two different manifestations of the instinct of escape or danger instinct. The egg-sitting of birds and the feeding of their young must similarly be regarded as successive manifestations of one instinct—the parental—since the satisfaction pursued is only finally obtained in the full development of the young birds. On the other hand, there are some activities which, although subsidiary to others, we shall be led by our criterion to regard as belonging to a distinct and separate instinct. The nest-building of birds and the nut-gathering of squirrels cannot be regarded as part of the activities of the parental instinct in the one case and the nutritive instinct in the other. These are things which the creatures will do for their own sake, which they will often be restless unless allowed to do, and which they find a complete satisfaction in doing apart from the greater purpose which the results subserve. The unmated caged bird will build a nest if provided with materials at the right time, and the well-provided pet squirrel needs must hide away his nuts. The nest and the hoard are ends to pursue which the bird and the squirrel respec-

tively are drawn on by certain propitious and stimulating circumstances. Nesting and hoarding are activities in which these creatures find a satisfaction, irrespective of the question whether circumstances are such as to make those activities of use for a further biological end or the satisfaction of a still more vital need. The constructive instinct and the collecting instinct are distinct facts in the mental constitution of bird and squirrel without which certain aspects of their behaviour cannot be explained. Our reason for distinguishing the different instincts from each other is that we may discover every independent source of motivation in the animals and in man. This, by using the criterion of instinct which we have adopted, we should be enabled to do.

There are other criteria which have been put forward as distinguishing marks of an instinct process. But these are much less fundamental and valuable. McDougall, for example, emphasizes three points: 1. That every instinct is marked by a tendency to the experience of its own peculiar emotional excitement. 2. That, since man is biologically connected with the higher animals, each of his instincts should be found also among them. 3. That, since instinct is a distinct fact of structure, it is apt to become diseased, and each instinct should therefore occasionally be found manifesting itself in exaggerated form apart from cases of mania. The third of these criteria is of little value, for the same may be said of every common complex and therefore offers no help in the decision of the question whether a certain common motive is due to an innate or to an acquired fact of structure. The second is very useful, but must not be allowed to lead us to rule out the possibility of man developing motives not found in any other member of the animal kingdom. Further, it does not help us much in deciding the scope and exact nature of any particular human instinctive tendency, the conditions

under which it is aroused and the method by which, and the end in which, its satisfaction may be sought. The fact that a squirrel collects nuts, for example, may suggest to us that certain acquisitive tendencies in man are instinctive; but any further information on the human tendency sought from the analogy of the squirrel's behaviour is apt to be misleading, to suggest, for instance, that the collecting instinct has to do only with food. The first also is useful, though only on the positive side. Because an instinct gives meaning to a situation and creates an urge to activity it does tend to create an emotional experience, and in certain instincts this experience is of a very definite and peculiar kind; fear, for example, normally accompanies the working of the danger instinct and anger that of the pugnacious instinct. But the emotion as a criterion of instinct loses much of its value, in the first place from the fact that indubitably instinctive behaviour, such as swift avoidance of sudden danger, can occur without any emotion being felt; and, in the second place, because the emotional excitement of one instinct is often indecipherable from that of another. This latter fact, in particular, renders the affective criterion of instinct most unsatisfactory and led to a serious misplacement of emphasis in McDougall's discussion of instinct in the *Social Psychology*. Some of the most important instincts have no well-defined emotional tone and would never have been distinguished at all if this criterion alone were used.

McDougall's three criteria must be regarded as useful assistants in the task of distinguishing the different instincts, and they point to important facts to be recorded about each instinct. But the real criterion of an instinct must be its end. This end, however, let us repeat, is not necessarily the end immediately present to the consciousness of the animal, for that may be vague and partial in the extreme; nor is it necessarily the end which the biologist

or sociologist sees the instinct to serve. Rather, it is the end result or activity which, by the very fact that its achievement brings satisfaction to the animal and causes the activity to cease, reveals itself as the end which the native constitution of the creature has gradually unfolded before it. Keeping this criterion clearly before us, we shall be led, I believe, to see the necessity of making some finer distinctions between instincts than have been generally accepted hitherto and shall be able to more exactly define precisely to what kinds of conduct each instinct naturally impels.

The most primitive of all the instincts is, of course, that of Nutrition. The earliest expression of the primal *élan vital* in the living cell must have been in the endeavour to build itself up and restore its waste from the materials surrounding it in the water in which it lived. In this effort after food, movement and locomotion must have been developed. Further, the food-seeking impulse tended to specialize itself in various ways, probably through the environment leading to habits which tended to fix themselves in the native tendency and at length to become passed on in the native constitution of succeeding generations. Thus we very early find a certain rigidity in the reactions to the need of food. Each different creature seeks its own peculiar kind of food and seeks it in its own peculiar way. So rigid are these reactions in some of the lower animals and birds that they have been known to die in the midst of plenty because their accustomed food had disappeared. Higher animals are, on the contrary, much more adaptable in the matter of food. In all cases, however, certain limits to adaptability are placed by the physiological structure of the digestive and other organs developed in the history of the species.

This instinct is, plainly, the motive behind a very large proportion of human activity and is capable of becoming

an urge of tremendous power. Hunger and thirst in animals will ultimately overcome any other motive except, occasionally, fear and the parental impulse. Man is capable of a much greater control of these primitive desires, but they must be reckoned, nevertheless, among the sources of the most powerful human motives. They affect, in a most striking way, the whole mental outlook of the individual; habits of action, feeling and thought built up under conditions in which these demands of nature are regularly satisfied become profoundly modified by the strong new passions aroused by their deprivation. The steadiest and most long-suffering populace may become capable of violent revolution if it begins to starve.

There are two minor instincts, not usually described as such, but regarded as tendencies to be included in the working of the Nutritive instinct, but which, if we are to recognize as a separate instinct every type of innately initiated purposive activity which is seen to constitute an end in itself for the creature, must be given independent status in our list. These are Wandering and Hunting.

In the animals, and in man, the need of food leads to wandering. But it is noteworthy in very many animals that wandering has become an end in itself. Well-fed animals will wander, and wander *away* from their accustomed sources of food. In man, wandering is certainly an instinctive impulse of an independent kind. The pleasure of travel, the delight of a tramp in the woods or hills, the enjoyment of picnicking, and the interest and excitement of exploration are all witness to the operation in such activities of a primitive instinctive impulse. The end sought seems to be simply a change of environment or habitat. Man, especially primitive man, tires of being in the one place, however well his needs are supplied there, and, like the herbivorous herd, needs must seek "fresh

fields and pastures new," even though the old are far from being exhausted. But the impulse is not so much to seek a *new* habitat as a *change* of habitat. The urge to wander back to the old haunts is just as strong as, or stronger than, the urge to wander away from them. Wandering animals return again and again to the same districts. The horse that escapes from his stable, if reared at a place not too far away, usually wanders in that direction. The emigrant feels homesick, not only for his old friends, but for the old places. It is *sameness* of habitat that seems to rouse the impulse and *change* that satisfies it. The strength of the exile's desire for one particular change and that alone, or above all, is due to the reinforcing and fixation of his wandering impulses by the effects of other instincts. In man the sight or thought of fresh territory also appears to be a stimulus of this instinct, for it would seem to be something more than the satisfaction of curiosity that creates the fascination every traveller feels to lie in the sight of some secluded valley or little-used by-path running off his well-marked way and gives its peculiar delight to roaming anywhere off the beaten track. To secure an occasional change of environment is, then, an end that human beings naturally seek. Our criterion, therefore, logically compels us to add Wandering to the list of human instincts ; and the value of doing so may be seen from the fact that Professor Burt has been led, by his study of delinquency in children, to place an unsatisfied and uncontrolled Wandering instinct among the common causes of youthful misdemeanour.[1] The biological value of the instinct would seem to be mainly its contribution of new sources of food supply, and it must have been the impelling need of food that contributed most to the development of the instinct. Perhaps it is as a result of this original connection of the two instincts that we humans find the satisfaction

[1] C. Burt : *The Young Delinquent.*

of an outing always made more complete if it is rounded off with a meal.

Hunting also must have been originally associated with the Nutritive instinct, but in some animals, such as the tiger, and in man it has certainly acquired independent status as an activity enjoyed for its own sake and not needing the stimulus of hunger, present or prospective, to set it in operation. Hunting requires as its end the killing of something. Until that is done the impulse is not satisfied. Hunting a drag instead of a fox is described as "tame sport"; so is shooting at mechanical moving targets compared with pigeon shooting; if there are no rabbits to be shot, the youth with the pea rifle will shoot beautiful birds which are of no use to him, but simply because he finds a satisfaction in it which he does not find in setting up a target to shoot at. As with Wandering, and indeed every other instinct, the stimulus is, in the main, the situation in which the activity is perceived to be possible. Certain complex situations carry for certain creatures the meaning of hunting. The need of food is commonly an important part of the stimulus, but where hunting is engaged in for its own sake this seems to consist simply in the perceived presence of a living thing which can only be killed by hunting and which cannot be killed unless the skill and activity of the hunter is exercised. This merely means that it is *the situations under which the instinct has developed that have eventually become its sufficient stimuli.* In man mere killing does not satisfy the impulse; the mere opportunity to kill does not rouse it. The cat playing with a mouse waits for its victim to run, and often allows it to get some distance away before feeling the impulse again to chase and seize it. A dog is usually not excited by a person walking past him, but he is very apt to give chase to a runner.

Another instinct which has arisen mainly out of the

nutritive activities is that of Acquisition. It is seen, for example, in the squirrel with his hidden nuts and the dog with his buried bone. But it is not merely a part of the food-seeking impulse, and it is more than a food-hoarding impulse. The creatures which manifest it seek and hoard food even when there is no scarcity. Indeed, when there is a real shortage the stronger impulse has its way, and these animals are apt to eat immediately all they find. But when gathering is easy they will busily build up a hoard far larger than is needed. For such creatures the very hoard is, plainly, an end in itself altogether apart from the fact that the hoard consists of food. Further, many creatures appropriate and hoard things which are not food, but which attract their attention in other ways. Jackdaws, magpies and some monkeys have a reputation in this respect. In man it was probably food that was first hoarded and claimed as individual property. Later, clubs and other articles gathered for their utility or other attractiveness were similarly treated. One has but to think of the great prevalence of collecting hobbies and the power of the money-making motive far beyond the mere usefulness of wealth to realize that in man Acquisition is a native impulse, an instinct of independent status; for it is so obviously an activity and an end enjoyed for its own sake.

Second only in importance to the instinct of Nutrition is that of Escape. The facts relating to it, however, are so familiar and well recognized that it need not detain us long. Its activity is commonly accompanied by the well-defined emotional experience of Fear. The native stimuli of the instinct in man, as manifested in the behaviour of the young infant, have been shown by Professor Watson to be: 1. The sudden removal of the child's support. 2. A loud noise. 3. Sometimes, a sudden push. 4. Sometimes, the sudden uncovering of the child just as it is falling asleep. The native reactions of the instinct, both

in man and in most of the higher animals, are either flight or other movement to avoid the object which has aroused fear, or else crouching and immobility. In man, however, these native stimuli and responses are early enormously added to and modified. Any situation, from the sight of a pistol to the story of a ghost, which for that individual has come to mean danger, will arouse the impulse and it will impel to any activity which habit and intelligence suggest as best promising escape. The conation, once aroused, does not rest until the situation which meant danger is transformed into one that means absence of danger. We are therefore distinguishing the instinct by the end in which its satisfaction is found when we name it the instinct of Escape.

The instinct of Repulsion is of similar biological purpose to that of Escape, but is quite distinct both in the end in which its conation finds satisfaction and in the emotional accompaniment of its activity, i.e. Disgust. McDougall points out that while fear prompts to bodily retreat from an object, disgust prompts to actions that remove or reject the offending object. It prompts us, for example, to spit out things that taste unpleasant and to avoid objectionable odours. Its biological utility is therefore obvious.

Curiosity is an instinct of very different character, as it commonly impels to approach towards and closer examination of the object which arouses it. The end in which its satisfaction is obtained is the better cognition of the object. Its stimulus is especially the perception of change, the noticing of something new in otherwise familiar objects. The instinct was probably developed in activity due to the food-seeking impulse, and it may be suggested that it is because of a vestige of this connection that the child still tends to complete the examination of every object by carrying it, if possible, to its mouth. But Curiosity has certainly long acquired independent status as an activity

pursued and enjoyed for the sake of its own end. The acquiring of new knowledge about any object that has once stimulated our curiosity brings a satisfaction of its own quite apart from any utility which that knowledge may possess.

The Constructive instinct will require a little more attention from us, for those psychologists who have adopted an autodynamic theory of instinct, such as that of Tansley, which we have criticized, have popularized some interpretations of its phenomena which on our theory will need revision. Further, the instinct is worthy of some special examination on account of its important relations to some of our present industrial problems.

The Constructive tendency is manifestly present in birds, in spiders, in many insects and in a few animals such as the beaver, rat, rabbit and mole. Also in many other species it may be found in rudimentary or vestigial form. Sometimes it subserves the ends of the parental instinct as in birds, sometimes the nutritive or hunting instinct as in the spider, sometimes the danger instinct as in the rabbit. But in all these creatures it has undoubtedly attained independent status as an instinct impelling to an activity, and leading to an end, enjoyed for its own sake. Birds, as we have pointed out, will build nests when alone in the cage, and the other creatures, too, seem to carry out their constructions independently of the need they ultimately serve and to find a present satisfaction in them independent of their ultimate utility.

There is considerable evidence that man too possesses this instinct. Children delight in making things, and in being in a play-house they have made themselves. Further, the satisfaction is obviously in the process of *making* and in the *achieving* of a certain result. Children usually prefer to clumsily build their castles for themselves rather than have adults do it for them in superior form. Adults, too,

find a pleasurable satisfaction merely in making things, be they gardens, mechanical contrivances, social societies or metaphysical systems. The end pursued by the Constructive instinct in man would seem to be the achievement of a certain relatively complete result (in the adult usually foreseen, though not necessarily so in the child) which can be recognized as the finished product of the individual's own activity. It is in this individual achievement of a result rather than the subsequent utility of the thing produced that the conation finds its completion and satisfaction.

Now on our theory every instinct requires a stimulus before it becomes active. But the urge of the constructive instinct has commonly been spoken of as though it needed none. Certainly the stimulus to constructiveness is not of the definite nature of those of many of the other instincts. It lies, as indeed does that of all the other instincts, in a certain complex situation which renders the activity possible. In particular, this stimulus to constructive activity lies in those situations in which, from the innate constitution or acquired experience of the individual, a certain constructive activity has become customary, or, in the case of man, which suggests such activity. Most commonly it is the material for construction that constitutes the stimulus to construct, but this material must possess a certain peculiar interest. In the lower animals this interest in certain materials is innate and, as in the birds, may only be active at certain seasons. In man it is materials that possess an acquired interest that specially call out his constructiveness. The burden of work for some ulterior end may be turned into a pleasure through the operation of the constructive instinct if only the worker can be both interested in his materials and can see at the end of his work a more or less complete construction which he can recognize as the result of his own effort.

Modern, highly subdivided industry, it has often been

pointed out, gives little or no satisfaction to the instinct of constructiveness. The instinct is cheated and starved by the monotony of the work and the incompleteness of the result. Such work, therefore, is apt to create feelings of boredom, restlessness, dissatisfaction. These are the typical mental conditions created by an instinct baulked in its pursuit of satisfaction. These facts have often been regarded as finding their explanation in the view of instinct as a charge of energy which needs must find periodical outlet. The constructive instinct, it is pointed out, finds no adequate outlet in the lives of men so employed. But the facts are susceptible of interpretation without this hypothesis. Men at work are placed in a situation in which their constructive impulses are necessarily stimulated, and if after hours and weeks of such work they have produced nothing that they can look upon as an adequate result, self-achieved, they will necessarily feel dissatisfaction and unrest. Such work is sure to become a bore, an irritant, because it arouses desires which it fails to satisfy. There is no need, therefore, to look upon the constructive instinct as a native urge to certain types of activity which needs must arise and demand periodical satisfaction altogether apart from the question of its stimulation.

Pugnacious conduct is readily recognized as instinctive. It is so thoroughly "natural," so widely prevalent in man and other animals, and is commonly accompanied by such a marked emotional experience, that the existence of a Pugnacious instinct will immediately be granted by the ordinary person. Yet it has recently been contended that fighting, in man, is always deliberate, not instinctive.[1] The grounds for this assertion are mainly found in the fact that other causes, chiefly religious and economic, can always be found for the typical warfare of primitive peoples. But warfare is only one manifestation of pugnacity in any

[1] W. J. Perry: *The Children of the Sun.*

case and, granting the existence of a Pugnacious instinct, could only arise from that instinct when the anger of a whole tribe or people is aroused. If the institutions of primitive races are such as to prevent such anger leading to war but to make war, nevertheless, a means to religious and economic ends, that does not prove the non-existence of the instinct in the people as individuals. Probably, this doubt as to the reality of the instinct of Pugnacity is due to the fact that pugnacity so plainly fails to exhibit that alleged characteristic of periodic explosiveness independently of stimulus which has so often, and so wrongly, been regarded as a mark of instinct. If pugnacity is a cause of war, either in savage or civilized societies, it is because the instinct has been stimulated in numerous individuals by opposition to national ends or, which is the same thing, by national insults. The instinct thus aroused impels to the endeavour to destroy that opposition, and the passion of anger that naturally accompanies it blinds people to other considerations by its power of concentrating attention upon its own end. In this way pugnacity certainly does tend to cause war, and if it is to be eliminated as such it will be, not, as some have suggested, by finding other channels such as international sport through which a people's pugnacity, as it is said, may find a sublimated expression, but by removing the causes of international friction which constantly stimulate the collective pugnacity of one nation against another.

The stimulus of pugnacity, as McDougall has pointed out, is opposition to ends pursued by other instincts; and its end (the end in which the creature finds final satisfaction) is the removal of that opposition even to the destruction of its source.

The question has been raised whether we should recognize a distinct instinct of Cruelty, for cruel conduct, of an undoubtedly instinctive character, is manifested by many

animals and in man. Children, and particularly boys, are proverbially cruel. But cruel conduct, on examination, can always be traced to the working of some other instinct; the giving of pain is not the end, but an incidental result of the pursuit of some further end. Much cruelty is due to pugnacity and to the hunting instinct. Among young children it is often due to curiosity. Among boys much apparently pugnacious conduct and much cruelty to each other is due to self-assertion and self-display.

The instinct which has figured most largely in psychological discussions for the past decade is that of Sex. Neurotic disorders, it has been found, are more commonly due to abnormalities of sex life than to any other cause. This it was that brought the study of the sex instinct into prominence. Now sex is an appetite as well as an instinct, for it is stimulated from within the body as well as from without, and these internal stimuli are periodic in their effect. The urgency of the sex instinct is therefore periodic too, and this fact it is, as we have already pointed out, that led to that misunderstanding of instinct which has been such a fertile source of error and which we have just criticized again in regard to Pugnacity.

But sex is also stimulated from without, the external stimulus being the perception or thought of one of the opposite sex. The final end of the sex instinct—the end in which alone the animal finds its completed satisfaction—is that of physical intercourse. But in our normal human experience that end does not necessarily leap into consciousness at once. Most men and women have trained themselves not to allow their minds to dwell upon that end, and consequently in such persons sex instinct can be stimulated, cause an added emotional excitement (make them "bright," alert, interested, lively), and modify conduct for a considerable time, centring it upon some person of the opposite sex, without awakening any aware-

ness of physical sex stimulation. Yet such conduct, if continued, and each impulse obeyed as it arises, inevitably leads to such an awareness and the total conative process only obtains full and final satisfaction in normal sexual intercourse. In this gradual unfolding of the end before consciousness as the individual is led on by his instinct through a course of sexual activity we have an experience at the human level somewhat similar to that which the lower animals must go through in every case of complicated instinctive activity; partial ends appear before consciousness which, being pursued and attained, bring a present satisfaction and a new stimulus to the pursuit of further and further ends until at last the process is complete.

Parental instinct must be distinguished from Sex. Sex instinct may attain its satisfaction even if no offspring are propagated. Parental instinct, apart from certain extensions of its operation in human beings which take place owing to the effect of similarities and the working of imagination, is only called into activity by the presence of the young, or of the embryos or eggs. The end of the instinct is the welfare of the young. It is only in the welfare of its offspring and the satisfaction of their every need that the Parental instinct of the adult finds gratification. Every cry stimulates the instinct and impels to the activity appropriate to relief of the indicated want. If a child's cry arouses anger in a parent, it is not for lack of stimulation of the parental instinct, but because of it and because the call to parental activity interferes with some other desires.

As has been mentioned, the Parental instinct, at the human level, and even to some small extent among the lower animals, may be aroused by objects other than offspring. This is due to resemblances between such objects and the needy young which are the native stimuli of the instinct. McDougall has stressed the importance of this, and regards it as the source of all altruism, pointing

out that it is just the *need* of the child which attracts attention and arouses parental activity, and showing how the perception and thought of need in persons or creatures other than children arouses similar emotions of tenderness with the impulse to provide relief. Of the social importance of this extended parental tendency there can be no doubt, and what are its practical limitations it would be difficult to say. Certainly, wherever there is pity and tenderness in social service there is parental instinct in operation. But of McDougall's right to declare this instinct the source of all altruism, even though it is the only altruistic instinct, we have grave doubts. To that point, however, we shall later return.

The correlative of the Parental instinct in the parent is the instinct of Appeal in the child. It is not easy to distinguish the impulse of appeal from that of escape and, indeed, both seem to be marked by fear. Yet our criterion would lead us to follow McDougall's lead in the *Outline of Psychology* and speak of Appeal as a separate instinct, for it seems to find its satisfaction in a distinct end, the close proximity to and attention of the parent. Its natural stimuli seem to be the same as those of Escape, but include also other needs and discomforts. A hungry child that cries will be appeased for a time by the mere presence and attention of the parent. This is not because the child reasons that food will soon be forthcoming, but because his secondary instinctive demand, in which for the time the first was forgotten, has been satisfied. After a little time the stimuli of the original demand will again press themselves upon his attention and he will again cry, and this time perhaps be satisfied with no amount of increased parental attention other than the giving of the food he craves. Yet even in cases of continuous hunger and pain the child receives a certain satisfaction from the attentions of the parent, although the other needs are not met. These facts reveal

the presence of an independent instinctive tendency or end which is being met and justify our recognition of an instinct of Appeal.

Though most prominent in childhood, the tendency to Appeal is also present in adult life. Tradition insists on its being well controlled in the male: many a battle every boy wages to overcome it. But in women it has always been allowed fuller scope. One very interesting effect of this tendency is seen in all religions in the tendency to prayer. It is no criticism either of the value or of the logical justifiability of prayer to say that it is an activity in which a primitive instinctive tendency finds satisfaction when it can find it in no other way. Especially when God is conceived as a Paternal Presence any excessive stress or need arouses the impulse to turn in appeal to Him, and considerable mental satisfaction is found in this even by minds usually irreligious. The psalmist long ago observed that when men "are at their wits' end . . . then they turn unto the Lord in their trouble."

So far, all the instincts that we have enumerated, except the Parental instinct, are distinctly egoistic in their tendency. The ends in which Nutrition, Escape, Pugnacity, Sex, etc., find their satisfaction are all of a non-altruistic character, i.e. the satisfactions with which the conations of these instincts cease have to do only with the needs of the individual, not with those of other members of the species. Whence then come the motives for that human conduct which is moral in the sense of being social? McDougall, as we have said, attributes all such conduct to extensions of the Parental instinct, and we shall examine that hypothesis later. But some other psychologists have found the source of altruism in the Herd instinct.[1] The theory of the Herd instinct has had a chequered career in the psychology of the past two decades. It would be impossible

[1] E.g. Trotter: *Instincts of the Herd in Peace and War.*

here to discuss adequately all the various and conflicting views of it that have been adopted. We must content ourselves with an examination of the phenomena in the light of our own criterion of instinct. The elementary fact of Herd instinct—that certain species of animals and birds tend to gather together and move about in groups—is undoubted. The question is as to how much is involved in the tendency more than this mere gregariousness.

A careful consideration of animal habits will show that the gregarious tendency is much more widespread than at first appears. It is certainly present in man. Our human associations give us a satisfaction of their own altogether apart from the material and intellectual benefits we derive from them. Man abhors solitude. Normally he finds a peculiar emotional delight in congenial society and experiences the painful emotional tone he calls loneliness—a restless dissatisfaction—if long deprived of it. Here then we have a conative tendency which can only find its full and final satisfaction in association with others of the species. Certainly, then, we must recognize a Herd instinct. The primary stimulus of the instinct is the perception of a group or individuals of that society in which it finds satisfaction. If one dog sees another on the street, he needs must run up to him and exchange formalities ; if he sees a pack, he must join it—if the pack will admit him. A horse let free in a paddock, seeing other horses on the other side of it, will almost invariably trot over to them, even though they are half a mile away. Even when the animal is hungry he usually will not stop to feed until he has joined his fellows. Most of the higher animals, even to the notoriously unsocial cat, betray this tendency to some extent.

Some of the problems relating to the Herd instinct have already been discussed in the previous chapter. In particular the reasons why the Herd impulse and the affect of

loneliness so often arise in the absence of the perception of others of the species (and thus, it might seem, in the absence of stimulus) have been explained and some of the apparent exceptions to Herd impulse have been dealt with. But even at the risk of some repetition we need still to inquire further whether the Herd instinct ever requires for its satisfaction anything more than mere presence with the herd. McDougall has stoutly maintained that it does not. Trotter, on the other hand, has attributed almost every form of social behaviour directly to Herd instinct.[1] In this, McDougall, we believe, is the nearer to the truth. Some animals, perhaps, such as the Damaraland oxen described by Galton,[2] may demand no more. But this is certainly not true of all. The dog seeks, not merely to find himself present with other dogs, but also to secure their recognition; and he is not satisfied until he obtains it. Horses manifest the same characteristic, though in less degree. On approaching a herd unnoticed a horse will commonly whinny to attract attention, and he is never satisfied to commence grazing until he has received at least a toss of the head in his direction from some member of the herd.

This feature of the Herd instinct is particularly noticeable in animal pets. It can be no other than Herd instinct that impels an animal to follow and attach itself to a human master, constantly seeking his society; though it is only under artificial conditions that a human being can be thus brought within the scope of an animal's herd and, indeed, become a kind of herd leader. Yet this relationship can be established between man and any of the notably gregarious animals; indeed, it is only those creatures in which this instinct is strong that show faithfulness and attachment as pets. After all, it is no stranger that the Herd

[1] Trotter: *Instinct of the Herd in Peace and War.*
[2] Francis Galton: *Enquiries into Human Faculty.*

instinct should be thus directed toward a creature of another species than that the Parental instinct should be so modified; and this also is of common occurrence. Not only do ducks mother chickens, and cats, puppies; but a hen may gather kittens under her wings, and a bitch may suckle a brood of young pigs. The relation between a man and his dog is therefore quite a legitimate one for the study of the Herd instinct, and it bears striking testimony to the fact that this instinct usually demands for its satisfaction some sign of recognition from other members of the herd.

Further, it must be an approving recognition. The dog that is met with a scolding reveals manifest displeasure and uneasiness. He might be more uneasy if not recognized at all, but his Herd conation is not adequately satisfied until he has received approval. That the same holds good of our human social cravings will be readily agreed, and this recognition of the multiple nature of the demand of Herd instinct—for the presence, recognition and approval of the group—is of very great importance for the understanding of human conduct. But the demand of Herd instinct is complicated by yet another factor of equal importance. This is the tendency engendered in each individual to give such emotional expression to his impulses as tends to arouse in others conations similar to his own. This McDougall has rather inaptly called Active Sympathy. It is a tendency to seek for sympathy from the herd, and might be better described as the Sympathetic Craving. This demand for sympathy, for fellow-feeling, for the knowledge (in man) that his desires and interests are shared by the others of the group, must be recognized as pointing to a fourth constituent of that complex condition of consciousness in which alone Herd instinct finds full satisfaction. No gregarious animal, least of all man, is content to feel a strong emotion or

conative tendency, and to feel it alone, knowing that the other members of the group do not feel it. That condition is one which divides him from the herd, and he is subtly conscious of the difference and therefore dissatisfied. Under such conditions one can feel intensely lonely even in a crowd. The natural tendency is therefore either to express such feelings, and thus call upon the group to share them, or, if this be not possible, to repress the emotion or tendency. Failing this, the individual may become so uneasy in the presence of the group that he leaves it. This demand for sympathy lies at the basis of private friendship as well as group fellowship. There are many of our interests and desires which we can get no group to share because they are unusual or too intimate. We therefore seek out some congenial soul in whom we can be sure of finding a response and become bound by ties of common interests and purposes to him. Such an individual acquires a value for us above others, and this relationship comes to provide the motive basis for much that passes for pure altruism though it has this definitely egoistic basis.

This tendency for each to give emotional expression to his own conations in the endeavour to arouse similar feelings and impulses in the herd would lead to considerable confusion were it not that, in the presence of the herd, the individual's private interests and feelings tend to be swamped by those of the majority through the operation of the Sympathetic Tendency, properly so-called—distinguished by McDougall as "Passive Sympathy." This is the tendency of individuals to be moved by a similar conation, and thus also to feel a similar emotional excitement, to that which they observe expressed by others. This is noticeable in all gregarious animals. The hunting yelp of a dog calls the whole pack to join in the pursuit. The frightened bellow of a bull stampedes the herd. The angry exclamations of a few fire a whole crowd with wrath.

This tendency is not an instinct. Rather, it denotes a way in which all instincts may be stimulated. In the life of the animal family, and in the early loose contiguity of members of the same species, the perception of the typical instinctive behaviour of one individual has frequently been immediately followed by the perception of the same stimulus as had initiated that behaviour. This has resulted in the instinct acquiring a new source of stimulus—that of the appropriate instinctive behaviour of a member of the same or similar species. Among gregarious animals we therefore find this Sympathetic Tendency, the tendency to feel together; it simply means that the emotion or conation which one individual expresses thereby tends to be aroused in all the members of the group who observe it. This tendency it is that gives its chief biological value to Herd instinct. The danger perceived by one becomes a warning to all. The food or water found by one is called to the attention of all. The prey that is too strong to be killed by one falls a victim to the united attack of the pack. Among human beings similar advantages accrue. By reason of the Sympathetic Tendency the group is bound together to feel and act as one. It has the disadvantage of tending to crush individuality, but it means that the group tends to oppose a united front to a common enemy and to face its common problems with a single purpose.

Suggestibility, or the tendency to adopt the thought and opinion of others, particularly of the group, is also an effect of Herd instinct. In part it is a result of the sympathetic tendency, for similar instinctive impulses involve the attachment of similar meaning to percepts and lead to the adoption of similar opinions on relevant themes. Partly, too, it is the result of the general aim, aroused by Herd instinct, to be one with the group in everything that marks the group in order to receive favourable recognition by the group. The effect of prestige in strengthening a

suggestion is due in part to the fact that it marks the individual as possessing the approval of the group so that his opinion seems to represent the group opinion, and in part it is also due to the instinct of Subjection, to which we shall shortly refer again.

The term " Suggestion " in this sense needs to be distinguished from that in which it is used by Coué and Baudouin. It is unfortunate that the one term has come to be used for two very different psychological facts. The confusion is due to the history of the theory of curative suggestion. It used to be thought that cures wrought in this way were due to some subtle power passing from the suggester to the person who accepted the suggestion. But there is now an abundance of evidence that no second person is needed. An idea which a person suggests to himself (i.e. expectantly and believingly attends to) is just as effective as one which he has adopted (with a similar mental attitude toward it) from someone else. Baudouin pleads that the term " Suggestion " should be reserved for this tendency of certain ideas to realize themselves and that the tendency for one person to adopt the ideas of another should be designated " Acceptation." [1] But historically this latter tendency has the better right to be called " Suggestion." Indeed, this term has become so firmly fixed to both processes that it is probably impossible to separate it from either. We would suggest, therefore, that a useful distinction might be made by speaking of the tendency of individuals to be *affected* by the ideas of others as Affective Suggestion. Then the tendency of an idea, attended to with belief and expectation, to *effect* its own realization could be distinguished as Effective Suggestion. This terminology we shall adopt wherever there is any likelihood of confusion.

A further effect of Herd instinct is seen in the tendency

[1] Baudouin : *Suggestion and Autosuggestion.*

to imitation. Spontaneous imitation is due to herd suggestion and sympathetically induced conation. Even deliberate imitation may have the herd motive behind it. To secure the recognition of a social group the individual must possess the marks of that group. Every group in human society has its marks or standards by which its members recognize each other. Some groups are characterized by religious or political opinion; others by social, industrial, intellectual or artistic status; others by manners, language, grammar and accent, etc. The effort to acquire these marks of the herd by individuals wishing to become recognized members of a certain group is one of the commonest reasons for deliberate imitation and also for much conduct that might, to superficial observation, seem to be induced by a higher ethical motive.

But though our discussion of Herd instinct has shown it to possess a much fuller significance than that conceded by McDougall, we have yet found no phenomena that would indicate that it ever impels directly to altruistic action as such. For the true moral motive we must look elsewhere. Instances from animal life where one animal or bird cares for an adult mate in distress are to be attributed to the Parental instinct aroused by the typical and peculiar appeal of the species. Other cases, which cannot be explained in this way, such as the united fighting of a common foe by all the herd when the escape of the majority would be easy, are readily explained by the sympathetic arousing of the appropriate instinct (in this case pugnacity) in the whole herd through the emotional expressions of one or a few. There is nothing in animal activity, therefore, to indicate the existence of a native tendency to serve the interests of the herd as such. Turning to the introspective evidence of our own herd impulses, we find that they attain full satisfaction when we are able freely *to associate* with the herd, are *recognized* and *approved* by its members, and can

share its interests. If any of these four things is lacking, there is something wanting in our satisfaction. But we are content with our society and with our relations to it so long as these four conditions are fulfilled. *There is no need that we should also be conscious of having in any way served the herd.* If we have served it, that fact may heighten our total sense of satisfaction; but if so it is not because the demand of our Herd instinct has been more completely met, but because such conduct has helped to fulfil a demand we have made upon the self, a demand of a very different nature from, and one which transcends, that of the herd or any other of those instincts which man shares in common with the higher animals. This reveals a motive of a different kind, into the origin of which we must inquire.

Before passing on to this further inquiry, however, there are three other instincts which must be mentioned. These are Subjection, Domination and Display.

The instinct of Display is very difficult to separate from the approval-seeking tendency of the Herd instinct, and almost the only reason for recognizing it as a separate instinct is the fact that it also manifests itself in connection with sex activity. The admiration of the opposite sex is an end sought for its own sake, not only by peacocks and stallions, but also by men and women. Further, there is a conation impelling to display which receives satisfaction from the admiration of a group from which the individual seeks none of the other satisfactions of Herd instinct—association, recognition and sharing of interests. A man will display himself before people he hates and despises.

It seems necessary, therefore, to recognize in man a separate instinct of Display which is stimulated (*a*) by persons of the opposite sex who also stimulate the sex instinct of the individual, (*b*) by human beings of a group other than one's own, (*c*) by members of one's own group. In each case the response is somewhat different, but the

end in which the conation finds satisfaction is always the admiring approval of those who have stimulated the instinct. This recognition of a separate instinct of Display must not, however, make us overlook the fact that the approval of one's fellows is also a necessary part of the satisfaction of the Herd instinct.

The instinct of Domination is included by McDougall with Display in the one instinct of Self-Assertion and Self-Display. But this is unjustifiable, for the ends sought are entirely different and often contradictory. Under the influence of the impulse to dominate children may often be observed to do things that they know will bring them the very reverse of admiring approval from their fellows. Introspection, too, shows that the satisfaction found in achieving domination over a number of one's fellows is very different from that obtained by securing their admiring approval; and the former satisfaction is quite independent of that approval if not given, and may even be enhanced by the absence of it. Many a domineering taskmaster has gloried in the fact that he is hated. The instinct must have found its origin mainly in the hunting pack. Every pack requires a leader, and it is the instinct of Domination that singles the leader out by creating a competition for leadership.

The counterpart of Domination is Subjection. This instinct, too, must have developed in the hunting pack and *pari passu* with the former. It is nowhere revealed so plainly as in those animals whose ancestors hunted or fought in packs, as did those of dogs, baboons and men. The development of the instinct simply means that creatures forced to accept a position under domination have developed a tendency which makes them gladly accept the leadership of their manifest superior. The dog grovelling delightedly before his master is the classical example of the instinct. Introspectively we most readily recognize its

conative drive in our feelings of loyalty to the various groups to which we belong.

These sixteen instincts complete our list. Others of a strictly limited or rudimentary nature there are, such as those impelling to physical adjustments necessary for sleep and excretion ; but these sixteen are the only innate conative tendencies of any real importance as widely ramifying springs of human conduct. It has been suggested that laughter should be added to the list of instincts, and McDougall, with his affective criterion (distinguishing the different instincts by their peculiar emotional accompaniments) is somewhat inclined to admit it. But with our much more exact conative criterion it is plain that it must be excluded. Laughter is not an end in which any innately determined conation finds its satisfaction. When spontaneous it is an emotional reaction, almost as purely reflex, unpurposive and uncontrollable as blushing. It is apt to occur during the course of any of several different instinctive activities (Display, Curiosity, Anger, etc.), especially at moments of tense waiting for a situation to develop and when there is a not unpleasing conflict of tendencies. There is no other important claimant to the status of Instinct that need be discussed here. These sixteen constitute the sum of the particular motives which are native to man. In one or more of them, modified, of course, in their working by more or less intelligent adaptation to environment according to previous experience and acquired knowledge, can be found the ultimate sources of far the greater part of human activity. Even in the one exception which, besides play, needs to be made (that of our highest moral conduct) there will constantly be found some motives from these primitive sources casting their weight " on the side of the angels " as well as some others constituting the difficulty which the Ideal calls upon us to overcome.

CHAPTER VI

THE IDEALS

THERE is, as we have already suggested, one motive which enters occasionally into human actions which it is impossible to ascribe to any one of the instincts such as man shares in common with the animals, or to any combination or organization of them. This is the notion of duty, the compelling influence of the idea embodied in the term "right," in the phrase "I ought." Much has been written in the effort to show how this ideal, and the moral imperative which springs from it, could have been formed out of the admittedly lower motives of the instinctive life. To this discussion McDougall has, in his *Social Psychology*, made a most valuable contribution. We cannot accept it as adequate, but it will be useful to outline it here in order to show how much of human conduct can be thus explained and at the same time to show just where the attempt breaks down.

Just as motor habits are formed by the constant repetition of an action, so, by the constant arousing of an instinct by some one object, emotional or conative habits are formed so that the individual habitually responds with the same conation and the same emotion to the similar presentation of that object. In this way a group of instincts becomes definitely organized about that object; the individual acquires a definite attitude of mind toward the object. This organization of instincts, or acquired mental attitude, McDougall, adopting the term from A. F. Shand, calls a "sentiment."

By the growth of sentiments the native instinctive responses become modified and regularized. The indi-

vidual is no longer carried away by every fresh stimulation of his instincts. His responses are regulated by the formed sentiments—of love, hatred, respect, etc.—which stabilize all his relations to the world he lives in. The instinct aroused within the sentiment is usually stronger than the native response of the unorganized impulse, for it is an habitual response. As such it more easily holds attention and may maintain sway over the conations of the individual in opposition to otherwise stronger native tendencies which may be aroused. Thus "perfect love casteth out fear," hatred may overcome the sympathetic tendencies of the herd instinct, and respect may curb the importunities of sex.

Sentiments are of two kinds—concrete and abstract. Concrete sentiments are sentiments for persons and things —love of children, or home, or friends; loyalty to one's country or school; hatred of a rival; pride in a profession; respect for a teacher, or for the self. Abstract sentiments are sentiments for qualities or ideas—love of justice, or mercy, or honour; hatred of vice, or cruelty, or selfishness. Very aptly McDougall illustrates the growth of these abstract sentiments:

"The child encounters cruelty at an age when he is already familiar with kindness under many forms, it may be cruelty directed toward himself or toward some animal, perhaps his cherished kitten. In either case he angrily resents it. Repetitions of such experiences confirm and render habitual these emotional attitudes toward the person or persons whose cruelty he encounters. He soon learns to apply the adjective 'cruel'; and, from this, it is a small step, under the guidance of language and precept and example, to think of cruelty in the abstract as something hateful, something the mere thinking of which suffices to stir his emotional resentment; thus he becomes able to say truly: 'I can't bear cruel people,' or: 'I hate

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cruelty.' In similar ways he also learns to say: 'That is a kind man; I like people who are kind.'" [1]

Thus, out of concrete experience, aided by the suggestions of others and by the generalizations of thought and language, the abstract moral sentiments of the individual are formed. But the abstract sentiments are usually of a thin and feeble sort compared with the concrete or with the native impulses of the unorganized emotions. Yet, when impulses from these apparently more powerful sources run contrary to those of the abstract sentiments, they do not always win. The seemingly weaker ideal motive may triumph. Whence does it obtain the power to overcome? This is the problem of the moral will.

McDougall's answer is that the strength of the moral will lies in the organization of character; that will is character. (In this, we may agree, he is indubitably right. It is his account of how the moral character is formed that seems to us inadequate.) Will-power depends on the closeness with which the sentiments which form the character are knit together. If a man's mind has come to be dominated by some single purpose, that singleness of purpose—that dominance of one sentiment over all others—gives him strength of will on any matter where that purpose is concerned. If a man's sentiment of self-regard is strong—if he cherishes his good name and his self-respect—then any question of conduct which he sees to affect that self-regard—that good name or self-respect—calls up all the powerful impulses organized within the self-regarding sentiment and flings them upon the side of the ideal motive, giving it the victory. It is McDougall's view that the self-regarding sentiment, acting in this way, is the very core of the moral will, in virtue of the fact that the abstract moral sentiments tend to become incorporated in the idea of the self around which that sentiment is formed.

[1] McDougall: *Outline of Psychology*, p. 437.

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We have already quoted from McDougall an illustration of the process of formation of the moral judgments and abstract moral sentiments. We can agree with this as an account of the way in which the child comes to the conclusions "I hate cruelty" and "I like kindness," and we may see that this sentiment, once explicitly formed, may affect his conduct. We can see, further, that, since the child's sentiment of self-regard leads it to do those things which his society approves and to avoid those it disapproves, knowing that that society also hates cruelty, he will be still more strongly induced to avoid being cruel. At a higher level of development still, when he has developed an ideal of the self as a moral person manifesting those characteristics which he has learned to love and admire, and strongly respects himself as such, then, even though he is sure the cruelty or the kindness will be entirely unobserved, he will be moved to avoid the one and to perform the other by the sheer power of that self-respect.

In the first case the motive might be expressed as "I hate cruelty." In the second it takes the form of "I should be ashamed to be seen to be cruel." In the third it is "Cruelty is unworthy of me." But none of these, not even the last, is quite equivalent to "I ought not to be cruel." The man who can resist a temptation by saying, "It is unworthy of me," will certainly have reached the plane where he can decide an action by saying, "I ought not to do it." Probably, for him, either statement may imply the other. But they are not synonymous. Admitting to the full the part played by the self-regarding sentiment in the strengthening of the moral character and the moral will, it still must be pointed out that the notion of right and wrong calls up a motive, be it ever so weak, which cannot be ascribed to that sentiment, nor to any other organization of instincts.

In almost every language there is a word corresponding

to our word "right." There is no tribe of humans, be they ever so low and whatever the shortcomings of their language, to whom Christian missionaries have been unable to convey the notion of right and wrong, finding sometimes that the idea was not unknown even though there was no special word to express it. And this word, this idea, has a different meaning from such words as "customary," "lawful," "worthy," "prudent," "pleasing," "gratifying," "useful," or any similar words expressing something that meets one or more of the instinctive needs of man. Yet the term "right" expresses something that answers to a need. The man must be not merely a barbarian, he must be utterly depraved, who does not feel some impulsion to do the thing which he has decided to be right. There is something within him that goes lacking, some element of his nature that is starved, if he declines to do right.

These two facts, that of the difference of meaning between the term "right" and such terms as "customary," and that of the impulsion of the notion of right, as recognized even by primitive savages, are illustrated in the following dialogue taken from Westermarck's *Origin and Development of the Moral Ideas*: "Mr. Howitt once said to a young Australian native with whom he was speaking about the food prohibited during initiation: 'But if you were hungry and caught a female opossum you might eat it if the old men were not there.' The youth replied: 'I could not do that; it would not be right'; and he could give no other reason than that it would be wrong to disregard the customs of his people."

We agree with McDougall that there is no *one* of the instinctive emotions from which this impulsion could spring. But even McDougall's brilliant analysis of the *sentiments* which grow upon this instinctive basis has failed to reveal any impulsion that is quite the same. Are we not driven to the conclusion that here is a purposive urge for

which those structures designated instincts cannot, either directly or indirectly, account?

The necessity of postulating some other source of urge to activity becomes clearer still when we consider the question of *the progress of the moral tradition.* A very large percentage of our moral judgments is, as McDougall says, imitative. They are opinions adopted from others, fixed into the individual mind by the power of suggestion. We all begin by absorbing the moral tradition of our community. We make it peculiarly our own when experience leads us to feel the emotions—of moral indignation, etc. —upon which that tradition is based. We thus come to form original moral judgments—original in the sense that they spring from our own emotions and sentiments—judgments of approval springing from such feelings as admiration, gratitude and positive self-feeling; judgments of disapproval mainly from anger, and especially from anger roused by the wounding of the tender emotion. But these judgments are not original in the sense of being independent of the moral tradition, or rising above it.

Judgments which are original in the sense of making a contribution to the moral tradition, altering or advancing it in some way, are not made without considerable deliberation on the problem of conduct. McDougall recognizes this fact and points out that such progress cannot be made in societies so rigidly ruled by custom as to allow no room for deliberation on moral issues. But certain factors, such as contact with other peoples with other customs, or changes in the circumstances of a tribe which make the old customs intolerable or unworkable, tend to shake the rigid hold of custom upon the minds of a people. This then gives opportunity for change. But when reason gets to work on problems of conduct, such as new laws or customs, it thinks of them in terms of right and wrong. It not merely contends that a certain custom is not equable

or not useful, but that, because of this, it is not right. Unless custom had been judged at the bar of this higher concept there could have been no advance to a higher plane, only a loosening of the grip of custom and a descent into anarchy, or else the mere exchange of one custom for another.

Whence, then, this higher concept which dominates the activity of reason when engaged about problems of conduct? It cannot itself be a conclusion drawn from other concepts. For man still at the level of customary morality is incapable of the deliberation on questions of conduct which would be necessary (if it were possible) to pass from the notion of "customary," or "gratifying," or "useful," to that of "right." On the other hand, it cannot be a conclusion drawn by man at a level higher than that of customary morality, for man could never have risen above customary morality without it. It is an unsatisfactory solution to describe it as an ultimate, *a priori* category of thought. What can it be, then, but a notion derived directly from experience—from the experience of that tentative and erring, but nevertheless persistent, striving of the soul of every living thing toward a fuller expression of the life within itself?

Perhaps the greatest step forward in the progress of the moral tradition is the birth of the concept that it is a nobler thing, a more righteous thing, a thing of greater moral value, to do a service for another than to do a service for self. This is *the notion of altruism as a principle of conduct*. Now altruism as a practice—not as a principle—is, in a certain limited way, very primitive. There are lowly forms of life that make elaborate preparations for the welfare of the offspring they never see. In nearly all the higher forms of life this parental instinct impels the creature to continue to care for its young through a period of immaturity after birth. Those who seek an explanation

of moral values in the natural animal impulses of men have readily assumed that the altruistic principles and conduct of the saints are motived by nothing more than the impulsion of this primitive instinct. Thus, McDougall writes :

"In the human being . . . there takes place a vast extension of the field of application of the maternal instinct. The similarity of various objects to the primary or natively given object, similarities which in many cases can only be operative for a highly developed mind, enables them to evoke tender emotion and its protective impulse directly, i.e. not merely by way of associative reproduction of the natively given object. In this way the emotion is liable to be evoked, not only by the distress of a child, but by the mere sight or thought of a perfectly happy child ; for its feebleness, its delicacy, its obvious incapacity to supply its own needs, its liability to a thousand different ills, suggest to the mind its need of protection. By a further extension of the same kind the emotion may be evoked by the sight of any young animal, especially if in distress ; Wordsworth's poem on the pet lamb is the celebration of this emotion in its purest form ; and indeed it would be easy to wax enthusiastic in the cause of an instinct that is the source of the only entirely admirable, satisfying and perfect human relationship as well as of every kind of purely disinterested conduct." [1]

This is perfectly true. But why is the relationship of mother and child "the only entirely admirable" one ; and why is it so "easy to wax enthusiastic" over an instinct simply because it is "the source of every kind of purely disinterested conduct" ? To be more prosaic, Why does conduct in accord with the altruistic principle arouse our moral enthusiasm more than any other ? All our instincts are equally innate, equally a part of the texture of our being.

[1] *Social Psychology*, p. 73.

Why should the expression of one of them seem to possess a greater moral value than the expression of any of the others? The maternal relationship is the "only entirely admirable" one, apparently because it is the only entirely disinterested one. But, since the greater part of our instincts is egoistic, whence the enthusiasm over the only impulses which are altruistic?

Consider the process of formation of the moral tradition on McDougall's theory. It begins when individuals of the primitive group commence to single out certain types of conduct in others which bring to them (not the others) certain satisfactions. Gradually a sentiment of liking for such types of conduct in others is formed, at first by a few individuals, but later spreading throughout the group. These types of conduct then secure the approval of the group, and, since each individual desires the approval of the group, they each tend to seek to manifest those types of conduct before the group. Those who manifest strikingly such conduct are objects of wonder and, since they have the approval of the group, the wonder is compounded with feelings of subjection, thus forming admiration. Those types of conduct which thus come to be first singled out and liked, and later admired, are, of course, such as confer benefits on numerous individuals or on the group as a whole. Courage and prowess in war and the chase; kindliness (due to extension of the Parental instinct) toward the weaker members of the tribe; justice or fairness on the part of tribal leaders; skill in performance of the common duties of the tribe or the family; these are the virtues that thus come to be admired and to arouse moral enthusiasm.

How comes it then, we may well ask, that a certain group of these virtues, because they are primarily motived by no impulse which seeks a satisfaction of the self, should be singled out as of pre-eminently greater moral value than

the rest? The higher valuation of the altruistic motive perhaps is not distinctly noticeable among primitive peoples. Among them the relative value of the virtues is possibly assessed merely by crude utilitarian standards modified only by the wonder aroused by the rarity of certain virtues or degrees of virtue. In such circumstances courage and skill are likely to be much more highly esteemed than kindliness. Is the pre-eminence given to altruism by the developed moral consciousness due merely to the growth of a recognition of the rarity of altruistic action and of the superior productivity of the altruistic motive in the region of action beneficial to other members of the group? Such a thesis would be hard to maintain. Altruistic action (understood merely as action directed toward the benefit of others) is not rare. It is constantly produced by the Parental instinct and by extensions of that instinct to objects similar to its native object; also by certain effects of the Herd instinct, and even through the self-regarding sentiment. All this, McDougall, in his *Social Psychology*, has, himself, clearly shown. Further, altruistic motives are not more productive of social welfare than are many others, though they are much less often directly productive of social harm. Pugnacity, Self-Assertion, Subjection, Curiosity and other impulses, are of enormous social, as well as individual, utility. The altruistic impulses possess no such noticeable superiority in production of social values as would account for their being placed on a pedestal apart from and above all other impulses—a position which, nevertheless, they occupy, as indicated by McDougall's pæan of praise for the maternal instinct.

If it is not any superior utility or capacity to produce admiration that marks out the altruistic impulse for peculiar moral approbation, then what is it? If we are motived by nothing more than our instinctive impulses, then what combination of those impulses conspires together to set

a peculiar and higher value on instinctive impulses of one special type—the altruistic? The egoistic impulses are far the more numerous and usually far the stronger; why have they consented to pay homage to the weaker group? Whence this ascendancy in the realm of moral value of a group of impulses which, except within the narrow field of the individual's immediate offspring, are extremely weak? To these questions, it is obvious, the theory that would trace all our moral judgments to the instinctive emotions can provide no answer.

The answer can only be that the altruistic motive satisfies something in our nature which the instinctive impulses cannot account for—some urge which is above them or more fundamental than they. Here, again, then, we see evidence that the instinctive impulses are not the whole of the urge of life.

This evaluation of altruism is but a particular instance of a general trend of the human mind—*the tendency to place a higher value on the goods of the spirit*. The Good, the Beautiful, the True, possess a magnetism for mankind that cannot be explained by any alchemy of instincts. Indeed, the call of the Beautiful appears to have made itself felt very early in the evolutionary process and to have been a factor in making certain instincts what they are. The beauty of the flower is attributed to the effect of the colouring on the insect that fertilizes it. The beauty of the bird's plumage or song has been explained as having been developed by sexual selection, possession of these attractions giving an advantage in pursuit of a mate and thus leading to the greater multiplication of the more beautiful specimens, with consequent greater chance of survival of the more beautiful type. This presupposes that the opposite sex is attracted by the beautiful. Whence this effect of beauty upon the living creature? Is it not a mark of all life? Though in the seeking of the beautiful the creature may

often err, and though what may appeal to one species as beautiful may not appear so to another; though individuals, even of the same species, may differ in their evaluation of the beauty of the same object; yet all but the very humblest of creatures manifest to some extent this seeking of the beautiful and are drawn to that which seems to them to be so: and who shall say that, in their own dim way, the same is not true of even the humblest, that seem to us only to grovel in their slime? Beauty: to discover it; to create it; to secure it; to enjoy it; to display it; this is an urge which is fundamental to the being of life.

The urge toward the Right or Good is perhaps plainest seen to be ultimate. Philosophers have always been hard put to it to explain man's moral motives except on some such ground. We have already pointed to the urge at work in the evaluation of altruism. Very dimly at first, but clearer and clearer as his moral consciousness developed, though with a few of those reactions which mark all progress, man has seen that of all his motives the ones that move him to the service of others rather than the service of self bring a deeper and more lasting satisfaction to his soul. Thus do the Ideals work. In the long process of experience man finds the ends that, being pursued, bring him the deepest and most permanent joy, and finding them, hands on the knowledge to those who come after.

The fact that the urge to Truth is also ultimate is somewhat obscured by the existence of an instinct of curiosity which, when roused, stimulates the creature to its pursuit. But curiosity, however refined, is something different from man's innermost sense of the ultimate value of truth. Though it be proven to the hilt that a lie has been useful to all concerned, it still retains a stigma as a lie, and there is something in every finer nature that revolts against it. Though we have a proverb that "Where ignorance is bliss 'tis folly to be wise," the saying smacks of a cynicism

which we feel to be unworthy of our best selves. The patient, earnest, eager seeking of the finest minds for a philosophy that shall glimpse a little deeper into the meaning of life, a little farther into the whence and whither of the universe, is moved by something deeper than the instinct which subserves the animal needs. A readily aroused and persistent curiosity is not commonly accompanied by a compelling love of truth.

The urge of the Ideals is something essentially different from that of the instincts. The instinctive end is never ultimate, but always a means unto a further end. The end, in the service of which all the instincts exist, is the preservation of the individual and the species. The end of an instinct must never be pursued for its own sake or the end of all instinct—the preservation of individual and species—tends to be defeated. Every instinctive urge, whether aroused within a sentiment or not, has a point of satiety. To pursue the activity beyond that point is to excite pain and cause injury. But the urge of the Ideals—the " desires of the spirit," as they have been called—is different. For them there is no point of satiety, and they can only be pursued well if pursued for their own sakes. This truth could hardly be better stated than in the words of Clutton-Brock :

" There is a truth about the nature of man and the nature of the universe which philosophy has established with the thought of centuries, and which philosophy alone can state clearly. This truth can be taught to all and should be known by all. It can be taught gradually to children from their earliest years ; and they will be convinced by it the more they are taught it and the more they act upon it. It makes education intelligible because it makes life intelligible ; and it is welcomed by every unperverted mind because it answers to the desires of that mind, to the desires of what we call the spirit.

" Spirit is a name given by philosophy to that part of us which has certain desires that are not desires of the flesh. Spirit is known by its desires, which are different from those of the flesh and can only be satisfied by different means. So there is a philosophy of the spirit which asserts the supremacy of the spirit and which has established the truth about the nature of man and the nature of the universe, a truth which every man can confirm for himself by his own experiments. The philosophy of the spirit tells us that the spirit desires three things and desires these for their own sake and not for any further aim beyond them. It desires to do what is right for the sake of doing what is right; to know the truth for the sake of knowing the truth; and it has a third desire which is not so easily stated, but which I will now call the desire for beauty without giving any further explanation of it. . . . These three desires, and these alone, are the desires of the spirit; and they differ from all our other desires in that they are to be pursued for their own sake. If they are pursued for some ulterior end, they change their nature. If, for instance, I aim at goodness so that I may profit by it, it is no longer goodness that I aim at, but profit. I may do what is right, but I do it for the sake of something else which I value more than doing what is right. I might do what is wrong for the sake of this something else, if it seemed to me that I could better achieve my purpose so. So if I try to discover the truth that I may profit by it, I am really aiming, not at the truth, but at my own profit. And my aim would lead me to believe what is untrue, if I thought that I should profit by that belief. In fact, the only way to discover truth is to seek it for its own sake.

" So the spirit has three activities, and three alone, as it has three desires; namely, the moral, the intellectual, and the æsthetic activities. And man lives so that he may exercise these three activities of the spirit, and for no

other reason. Every other theory of life, however it may be presented, amounts to this—that a man lives so that he may live—and is incessantly contradicted by all the higher values and activities of man. It cannot be explained why these values and activities seem to man higher, if they are really subsidiary to the mere business of living. But the philosophy of the spirit says that the business of living is subsidiary to them, and that man can only satisfy himself in his life if he lives so that he may exercise the activities of the spirit and not so that he may go on living." [1]

These "desires of the spirit" are unconditional and ultimate; but they are not discrete and arbitrary. They are a trinity of ultimates which are yet a unity because they are but three different aspects of the spirit's one desire. That one desire of the spirit is the desire for life and for life ever fuller. The lesson of the psychology of these deeper human motives is that Life is the ultimate end of a life. Not that the life of the individual living organism is the ultimate end for itself—that would be to say "that a man lives so that he may live"—but that there is a "universal" Life which is the ultimate end for which every creature lives.

The truth of this is proved by every response of man or beast to the call of the beautiful, the true or the good, from the dove's choice of the male that coos the sweetest to the story of Him who came that we "might have life and have it more abundantly." For these responses to the perceived beauty, truth or good are not the answer of the life of the individual to some need of the individual organism, such as those to which the animal instincts respond. They are the response of that offshoot of the universal Life, which animates every living organism, to the opportunity of its own expression. For this is what constitutes the Ideal: the Beautiful, the True and the Good

[1] Clutton-Brock: *The Ultimate Belief.*

are whatever helps to make life possible, whatever makes life fuller, and whatever makes the fuller life more abundant.

There have been two schools of thought on the meaning of beauty. One school has regarded it as objective, as residing in the external form of the beautiful thing. The other school has regarded it as subjective, as residing in the thought or feeling expressed or called forth by the thing. This is the essence of the difference between the Classicists and the Romanticists. But both are right. Form and expression are beautiful just in so far as they have value for Life.

Consider some of the factors in beauty which we are accustomed to distinguish. Perhaps the first essential of beauty, whether in sound or shape, or in movement or colour, is harmony; and harmony is beautiful because it is life's expression, fuller and freer because unconflicting. There is a beauty in simplicity because it is life's expression unwasted. There is a beauty in richness of adornment, if it be not prodigal, because it is life's expression in abundance. In line and curve and movement there is beauty when they manifest strength and ease, freedom and grace. In colour there is beauty so long as it is harmonious—the bright colours because they stimulate life, the delicate shades because they express and evoke the refinement of life. In literature, too, it is the same qualities of ease and grace, harmony and freedom, vigour and fullness and power of life, expressed in the writing and evoked by the reading of it, that constitute its beauty. Further, "Beauty is truth and truth, beauty," and there is a "beauty of holiness." All things that are beautiful are so because they are expressions, or suggest the expression, of life, full and free, and because such things, calling forth more life and fuller in all that perceive them, are of *value* for Life.

But opinions differ on questions of beauty. They differ because experience differs; and the differences in the

appreciation of the beautiful are as subtle and fine as the differences in human experience. We judge of the beautiful out of our experience. That which our experience has taught us expresses or suggests the fuller, freer, more abundant life we appraise as beautiful; the reverse we condemn as ugly. The operation of this principle is aptly illustrated in some observations of a writer of a century ago:

"The redness of any morbid inflammation may display a gradation of tint, which, in a pink or a rose, we should think as beautiful as the 'purple light of love and bloom of young desire'; and the cadaverous paleness of death or disease, a degree of whiteness, which, in a piece of marble or alabaster, we should deem to be as pure, as that of the most delicate skin of the fairest damsel of the frigid zone; consequently, the mere visible beauty is in both the same; and the difference consists entirely in mental sympathies, excited by certain internal stimuli, and guided by habit. The African black, when he first beholds an European complexion, thinks both its red and white morbid and unnatural, and of course disgusting. His sunburnt beauties express their modesty and sensibility by variations in the sable tints of their countenances, which are equally attractive to him, as the most delicate blush of red is to us." [1]

This is a shrewd, if rather commonplace, reference to the relativity of our notions of beauty. Æsthetic appreciation is conditioned by experience. The arrangement of colouring which in itself would stimulate life, and would therefore be valued as beautiful, is regarded as ugly when seen in associations such that experience leads to the belief that it expresses the negation of life.

Beauty is valued, then, because life is valued. Yet Clutton-Brock is right in declaring beauty to be of ultimate value, for when we value beauty we value it not merely

[1] Knight: *An Analytical Enquiry in the Principles of Taste*, p. 83.

as a means to life. Beauty has a meaning for us ; it means life. It is a form in which we know life. When we value beauty, therefore, we are valuing Life itself.

As with beauty so with truth. Truth is not valued merely because it satisfies an instinct of curiosity. Our sense of the ultimate value of truth is our recognition of its essential value for life, for truth is always a harmony, and a harmony not created by repression, but a harmony which creates freedom. " Ye shall know the truth, and the truth shall make you free." In valuing truth we are valuing life. As soon as the organ of a mind has developed enough for it to conceive the difference between truth on the one hand and ignorance or error on the other, then its experience begins to teach it the value of truth for life. Then, as it learns this lesson, that living soul begins to respond to the thought of truth. This response is not merely due to the realization that the knowledge of certain truths has a value for that individual life. If that were all, then even this innermost soul would prefer ignorance or error, if convinced that ignorance or error meant its own individual bliss. But that the innermost soul never does ; though a man may choose not to know, there is something within him, deeper than mere curiosity, which hungers for the truth. The response is due to the fact that all truth has come to mean life, and fuller life. The soul's valuation of truth is life's valuation of Life.

Is not the same true of the Ideal of the Right or Good ? In the history of thought the ultimate good has been variously defined as pleasure, as utility, as contemplation, as self-expression. But are not these and all other theories but interpretations of the central thought that the ultimate good is life itself, lived in the fullness of its capacity and scope ?

Let us return to the problem of the origin of altruism and see what new light is thrown upon it by this thought

of life as valuing Life. Our conception is this: The lower animal knows only the life of its own immediate experience. It values that life. It knows its own life best in its activity and in the experience of contact with the external world which activity brings. It therefore values activity. Activity or self-expression is an end for it. It plays. In and through such active contact with the external world those distinct types of activity which we distinguish as instinctive have been developed. The animal thus acquires a considerable number of distinct and separate values—a number of distinct and separate ends in which it can find a temporary and relative satisfaction. But the whole motivation of the creature's life cannot be described as arising from the mere sum of these instinctive ends or values. The ultimate value for the creature—the value which has created all these separate and often conflicting instinctive values—is life itself.

Now the lower animal knows and values life only in itself, and even there only the life of its immediate present experience. But man achieves the *notion* of life. He then looks into the future and contemplates his own life as a continuing thing, something that will still be and still have needs to-morrow, and the next day, and the next. He looks round him and conceives life to exist in bodies other than his own. Then, *wherever he finds life he values it.* He cannot help but value it, for it is of the fundamental nature of his own life and mind to do so. He values his own future life (not merely impulsively and instinctively now, but also deliberately) and he values the lives of others. Here, then, is introduced a new source of conflict of values, for he must often control the impulse of the moment if he would do the best for his own future; and still more must he control it for the sake of the value of other lives. Here is the beginning of morality, for this valuing of life is something felt to be different in kind

from his instinctive valuings. Its motive force may not be stronger, but it springs from the core of his being, from his whole and central self, whereas the promptings of instinct spring only from some partial self. This difference may not be analysed, but it is fe t ; and it is because of this that the moral values are realized as something higher.

But man sees, further, that life is not everywhere equally present ; some organisms manifest but a poor and scanty life. Where life reveals itself to be fuller and more abundant he values it more. At the human level he sees a vast extension of the range and power of life, and he therefore places on human life far the greatest value and readily subordinates the needs of life where he finds only its lesser expressions to those of his own kind where he finds its greatest. Further, he finds that certain ways of living are conducive to the development of life in all its fullness and to the multiplication of the finest forms of life. These ways he then values, and he expresses that value by calling them " Good."

The Good, therefore, like the Beautiful and the True, is that which life values because it means Life. The triple Ideal is but an analysis of the spirit's one desire ; and that desire is the response of the life within to that which has come to mean for it fuller and more abundant life—that which means Life in the highest sense, a sense in which Life transcends the little being that conceives it.

CHAPTER VII

THE FACTS OF UNCONSCIOUS PROCESS

Before we proceed to any further positive development of our theory there is a negative argument from the facts of unconscious process which must be met. Further, these facts, which may seem at first to present an insuperable difficulty for the theory of human action which we have adopted, will be seen on closer examination to support it and also to supply a valuable suggestion for the solution of the great theoretical problems of our last two chapters.

Our theory as thus far developed may be stated briefly thus. The human mind is a unit. It is a conscious, active and teleological, or purposive and forward-looking, unit. Its consciousness and its purposing and expectation are affected by what happens to, and in, the body. And it in turn effects purposive movements of the body simply by "expecting" those movements to occur. But this conception of a mind as essentially unitary and conscious, and this theory of the place of expectation in the initiation of action, would seem, at first sight, to be contradicted by the facts of unconscious process; for those facts have led to the widespread adoption of a diametrically opposite view. To those facts, then, we must now turn our attention. First, we must endeavour fairly to present the case for the reality of unconscious processes, however they are to be interpreted. Then, in the next chapter we shall endeavour to explain how these phenomena come to pass and to show that, after all, they fit exactly into our theory.

The concept of the Unconscious is the distinguishing thesis of what has come to be called the "new" psychology. The older psychology practically confined itself to the

study of the actual content of consciousness. It used, almost exclusively, the method of introspection, and the individual consciousness alone is open to study by that method. These limitations were not unrecognized by the workers then in the field. William James, in his *Varieties of Religious Experience*,[1] expressed the conviction that the most important step forward made by psychology in his time was the discovery of what he believed to be evidence of the existence of a set of conscious facts outside of the primary consciousness altogether. These facts are inaccessible to introspection, and James regarded their experimental study as one of the most important and promising tasks awaiting the psychologist. It is these facts which constitute the special data of the "new" psychology, and upon them has been built that body of psychological theory which goes by that name. In spite of the internecine differences of its sponsors, it is certainly sufficiently homogeneous to be distinguished by one appellation and sufficiently distinct from the traditional psychology to deserve the distinguishing title which it has adopted. As has been stated, the distinguishing concept of this "new" psychology is that of the Unconscious.

The Unconscious is usually regarded by this school as mental and as dynamic. Its relation to consciousness has been likened to that of the great mass of the iceberg, submerged in the sea, to that of the comparatively small fraction visible above water. Mind is the whole berg: but by far the largest and most important part lies below the surface, i.e. it is unconscious. The evidence for the existence of an unconscious part of mind is drawn from the psychology of the abnormal. The Unconscious is an hypothesis put forward to explain certain facts discovered in the practice of hypnotism and suggestion and in the study of hysteria and other neuroses, and of such peculiar

[1] P. 233.

conditions as those of multiple personality, somnambulism, mediumship, dreams, etc.

Morton Prince, in his work on *The Unconscious*, produces some startling examples of highly complex processes—processes which we are accustomed to regard as evidence of mental activity of a fairly high order—which were performed unconsciously. From these we select four; the first a case of unconscious writing and a remarkable feat of memory; the second a case of unconscious translation of imagery—from auditory to visual; the third a case of unconscious calculation; the fourth one of unconscious poetical composition.

The first case is that of an experiment in automatic writing, under hypnosis, with one of Dr. Prince's patients who suffered from an intense fear of cats, especially white cats. In her normal conscious condition she could recall no experience of her life which could account for the phobia. Efforts made with the patient under hypnosis proved equally unsuccessful. At length a pencil was put into her hand while she was still hypnotized, and the hand then wrote automatically, without her knowledge, the following account of an episode of her childhood:

> I think I know about the cats. I can remember myself a little child playing on the floor with a kitten, and it began to run about the room, and had a fit, I think, and it jumped on me, and I was alone, and I screamed and cried and called my mother, but no one came, and I was very much frightened. I do not believe I ever told anyone. It was a white kitten. It ran out of the room, and after a bit I went on playing.[1]

The experimenter next asked that the hand should describe the furnishings of the room in which the incident occurred, and the plan of the house. This was done in considerable detail, although the patient had left that house when six years of age, and on being awakened could give

[1] Prince: *The Unconscious*, p. 17.

no account of it, or of the furnishings of the room, and could not recall them even after reading the automatically written description. That this description was correct, however, was confirmed by the testimony of older members of the family. Here, then, we have a case of the action of writing, and a feat of memory, of which in her ordinary waking state the lady was not capable, being performed unconsciously. It is a case of unconscious brain functioning, and it certainly has the appearance of a case of unconscious mental functioning.

Fully as remarkable as the unconscious process by which this memory was recovered is the fact that this experience, though forgotten, and indeed, it seems, because forgotten, could still exercise such power in the patient's life as to create the phobia with which she was troubled. One can readily understand that such a severe fright as she had experienced might, for a long time, recur to her memory every time she saw a white cat, and tend to make her afraid of the animal. But here the experience was forgotten, and yet the sight of a white cat continued to arouse fear and to do so to a greater degree and over a longer period than the clear memory of the incident could possibly have done.

Still more amazing is it that, when the experience is at last recalled, it, and the sight of a white cat, cease to be a source of fear. Here, again, we seem to have a case of the unconscious functioning of a memory. But the case has certain peculiarities which, as we proceed, we shall find are not altogether uncommon. For the present we shall not pursue further our inquiry into these features of the case.

A less remarkable case, but one in which the memory process involved is rather more complex, is the one cited by Prince as a case of unconscious translation of imagery.[1]

[1] Prince: *The Unconscious*, p. 58.

The same patient was sitting reading and thoroughly engrossed in her book. In the next room, a secretary was transmitting a cablegram over the telephone to the telegraph office. Later, in Dr. Prince's consulting-room, actuated by curiosity, the patient gazed into a crystal which had been frequently used in her case as a means of recovering subconscious material. There she saw printed the words of the cablegram. These words had no meaning for her, as she had absolutely no recollection of having overheard the telephone message. The words must have been audible to her, but she was too deeply engrossed in her book to be conscious of having heard them. The remarkable fact is that, although they had never been clearly presented to consciousness, the words were conserved and could be reproduced. Equally worthy of note is the fact that an experience—if, indeed, it was an experience—which was never clearly conscious has not only been recalled, but has translated itself into the imagery of a different sense. There is a complicated process involved in the visualizing of words merely heard. This process was performed unconsciously, for the message had not entered consciousness until it was seen in the crystal vision.

A still more intellectual process which may be performed unconsciously is that of calculation. Experiments of this kind have frequently been made. The subject, under hypnosis, is told that he is to be given a certain sum to work, and that he is to write down the answer at a certain time. He is then given the sum, such as to add or multiply certain numbers, to calculate the number of seconds between two given points of time, or the change to be received out of a given sum of money after making certain purchases. Immediately the sum has been given the subject is awakened. This is important, for he is not allowed time to work the sum while in the condition of hypnotic consciousness. If the experiment is successful—

and with appropriate subjects it usually is—the correct answer will be written down at the appointed time. The subject will not know why he has written the figures and will have no recollection of having been given the sum or of having made the calculation.

After an experiment of this kind, in which the subject had been told to add the numbers 458 and 367, Prince endeavoured to recover, under hypnosis, memories of the actual carrying out of the, at the time, unconscious calculation. The result he records as follows :

" In what may be termed for convenience the secondary consciousness, i.e. the subconsciousness, the numbers 458 and 367 appeared as distinct visualizations. These numbers were placed one over the other, with a line underneath them such as one makes in adding. The visualizations kept coming and going ; sometimes the line was crooked, and sometimes it was straight. The secondary consciousness did not do the sum at once, but by piecemeal. It took a long time before it was completed. The sum was not apparently done as soon as one would do it when awake, by volitional calculations, but rather the figures *added themselves*, in a curious sort of way. The numbers were visualized and the visualization kept coming and going, and the columns at different times added themselves, as it seemed, the result appearing at the bottom." [1]

Another process which ordinarily requires a considerable degree of attention and may be regarded as a mark of a fairly high order of intelligence, which yet may be performed unconsciously, is that of versification. One of Dr. Prince's patients records the following experience :

" I woke suddenly some time between three and four in the morning. I was perfectly wide awake and conscious of my surroundings, but for a short time—perhaps two or

[1] Prince: *The Unconscious*, p. 170.

three minutes—I could not move and I saw this vision, which I recognized as such.

"The end of my room seemed to have disappeared, and I looked out into boundless space. It looked misty but bright, as if the sun was shining behind a light fog. There were shifting wisps of fog blowing lightly about, and these wisps seemed to gather into the forms of a man and a woman. The figures were perfectly clear and lifelike—I recognized them both. The man was dressed in dark everyday clothes, the woman in rather flowing black: her face was partly hidden on his breast, one arm was laid around his neck: both his arms were around her, and he was looking down at her, smiling very tenderly. They seemed to be surrounded by a sort of rosy atmosphere: a large, very bright star was above their heads—not in the heavens, but just over them: tall rose bushes heavy with red roses in full bloom grew up about them, and the falling petals were heaped up around their feet. Then the man bent his head and kissed her.

"The vision was extraordinarily clear, and I thought I would write it down at once. I turned on the light by my bedside, took pencil and paper lying there and wrote, as I supposed, *practically what I have written here*. I then got up, was up some minutes, went back to bed, and after a while to sleep. The clock struck four soon after getting back into bed. I do not think I experienced any emotion at the moment of seeing the vision, but after writing it down I did.

"The next morning I picked up the paper to see what I had written and was amazed at the language and the rhythm. This is what I had written:

"Last night I waked from sleep quite suddenly,
And though my brain was clear my limbs were tranced.
Beyond the walls of my familiar room,
I gazed outward into luminous space.

Before my staring eyes two forms took shape,
Vague, shadowy, slowly gathering from the mists,
Until I saw before me, you—my Love!
And folded to your breast in close embrace
Was she, that other, whom I may not name.
A rosy light bathed you in waves of love:
Above your heads there shone a glowing star:
Red roses shed their leaves about your feet
And as I gazed with eyes that could not weep
You bent your head and laid your lips on hers.
And my rent soul . . . [apparently unfinished]

"The thoughts were the same as my conscious thoughts had been—the vision was well described—but the language was entirely different from anything I had thought, and the writing expressed the emotion which I had not consciously experienced in seeing the vision, but which (I have since learned) I had felt during the dream, and which I did consciously feel after writing. When I wrote I meant simply to state the facts of the vision." [1]

Dr. Prince subsequently endeavoured to obtain from this patient, under hypnosis, information as to the subconscious processes and forgotten experiences accompanying and surrounding the vision and the poetical composition. He found that the vision had been preceded by a very similar dream which, however, unlike the vision, had a decided emotional accompaniment of a kind aptly described by the unfinished line in the automatically written verse: "And my rent soul . . ." The script is thus seen to give an interpretation to the vision which the lady was not conscious of during the vision or when subsequently writing what she thought to be a simple account of it. Evidently, as Prince suggests, the same underlying process produced the dream, the vision and the automatic script and "this same process expressed the same ideas in verbal symbolism as a substitution for the hallucinatory symbolism." [2]

[1] Prince: *The Unconscious*, p. 204. [2] *Ibid.*, p. 207.

Of the actual writing hypnotic procedure failed to recover a very full account. The subject thought herself to be writing certain words, and in reality was writing others. Little information could be gained as to how these other words were put together. The hypnotic consciousness could only remember that they appeared confused and jumbled in her "subconscious mind": no attempt at selection of words or thoughts could be recalled, but "co-conscious 'images' of the words of the verse came just at the moment of writing them down." [1] These images were of printed words. Sometimes a few words only appeared. Sometimes a whole line at a time. These words were then written down. The composing, therefore, like the calculations in the former experiments, was done in some stratum of intelligence beyond the reach of even the hypnotically stimulated memory. This case and the calculation experiments thus provide evidence for the most important conclusion that highly complex intellectual processes may be performed of which the subject at the time has no knowledge. Morton Prince regards this as evidence of the existence, in such cases at least, of a "co-consciousness" and so speaks of these processes as "subconscious," but not "unconscious." But that they can be satisfactorily explained without this hypothesis of a "co-consciousness" we shall endeavour to show later.

Besides the apparent evidence of unconscious mental processes which is drawn, like the above, from the practice of hypnosis and from the study of hypnoidal conditions such as those in which crystal visions and automatic writing occur, there is a vast bulk of further evidence from the newer psycho-pathology, particularly from the practice of psycho-analysis. This we must next study, and we may well begin with a brief description of a few case histories from well-known practitioners.

[1] Prince: *The Unconscious*, p. 208.

The core of the psycho-analytical doctrine is that affects may in some cases be unconsciously conserved and may unconsciously produce effects upon the individual's health or behaviour. The original causal conditions of this alleged affect are conscious, i.e. they are actual experiences. The affect itself may also at first find a place in consciousness or it may be unconscious from the beginning. Whichever it is, this something, regarded by psycho-analysts as an affect, persists and functions " in the unconscious." How and why it becomes and remains unconscious we shall discuss later.

The first is a case of obsessional neurosis, recorded by Freud.[1] A lady nearly thirty years of age suffered from several severe obsessions. One of these, performed usually a number of times every day, was to " run out of her room into the adjoining one, there take up a certain position at the table in the centre of the room, ring for her maid, give her a trivial order or send her away without, and then run back again." The lady could give no explanation of this conduct. At length however, in the course of analysis, she remembered an incident which explained it. As a young bride, ten years before, a situation had occurred in which the good name of her husband in the eyes of the servants depended upon their seeing a certain stain which he had made upon a cloth. Though the circumstances which led to this situation later led to the separation of the lady from her husband, she still defended and idealized him. The obsessive action was a part of this defence, and the lady now saw its meaning as such. She always, when she performed the action, stood in such a position at the table that the maid on looking at her could not help but see a certain great mark on the tablecloth. The act, therefore, symbolized to her the ensuring that the servants should see the significant stain. It

[1] *Introductory Lectures on Psychoanalysis*, p. 221.

meant that she was defending her husband's reputation in their eyes.

Commenting on this case, Freud says: "She understood neither the whence nor the whither of her act, as long as she carried it on. Mental processes had been at work in her, therefore, of which the obsessive act was the effect; she was aware in a normal manner of their effect; but nothing of the mental antecedents of this effect had come to the knowledge of her consciousness. She was behaving exactly like a subject under hypnotism whom Bernheim had ordered to open an umbrella in the ward five minutes after he awoke, but who had no idea why he was doing it. This is the kind of occurrence we have in mind when we speak of the existence of unconscious mental processes; we may challenge anyone in the world to give a more correctly scientific explanation of this matter, and will then gladly withdraw our inference that unconscious mental processes exist." [1]

This is an excellent illustration of the class of facts to explain which the hypothesis of an unconscious mind is relied upon. But before inquiring whether Freud is justified in declaring the unconscious processes which, starting from the unpleasant experience of the young bride, led to the constantly repeated obsessive action, to be mental processes, we will do well to make a much more thorough study of these phenomena.

Dr. Rivers' famous case of claustrophobia [2] is one that should not be passed over. This patient was a medical man over thirty years of age who from childhood had suffered from an unnatural dread of enclosed spaces, and especially of finding himself closed in in a place whence he could not easily make his escape. He hated tunnels and a tube railway journey distressed him horribly. Soon

[1] *Introductory Lectures on Psychoanalysis*, p. 234.
[2] *Instinct and the Unconscious*, pp. 170 ff.

after war broke out he enlisted and worked with the army in his professional capacity, but life in dugouts proved almost unbearable. He had never, up to this time, realized that this dread of enclosed spaces which afflicted him was anything exceptional. He had always been intensely sympathetic toward miners and prisoners in cells, supposing that they suffered just as he would have done under the same circumstances. Now, however, finding that others could live and work in comfort under conditions which filled him with horrible fear, he realized that his dread was pathological. After having been weakened by trench fever, his phobia became far worse. He could not sleep and was at last sent into hospital, first in France and later in England. There he came under the care of Dr. Rivers.

He had not been strong as a child, but had always been nervous and excitable. When in ill-health he had had attacks of stammering. Three times during the course of his studies he had been forced to give up, for a time, on account of sleeplessness and other nervous symptoms. For a time he had put himself under the treatment of a Freudian analyst, but without effect. This analyst had worked on the Freudian theory that all neuroses originate in sexual experiences of childhood.

Dr. Rivers, after convincing him that other than sexual experiences might issue in neurosis, began the process of analysis again. Following up trains of association which originated in a dream, several long-forgotten incidents of early childhood were recalled in which fear was associated with animals. A little later he had another dream and, in thinking over it, remembered an incident which had occurred when he was only three or four years of age. He had taken something he had found to a rag-and-bone merchant. He entered the house through a dark, narrow passage and, having sold his find, and turning to leave, found the door at the end of the passage shut. He was

too small to open it, and a dog at the other end of the passage began to growl. Vividly now he remembered his childish terror at the time and how, for long after, he could not pass that house again without fear. He marvelled that he could ever have forgotten the incident, so deep an impression had it made upon him at the time. He felt convinced that this experience was the one in which his dread of being confined in a closed space originated, and, in his interest in this early memory, completely forgot the dream which had helped to recall it.

After the recovery of this memory his phobia disappeared. His occasional stammering and sleeplessness were not much affected, but the claustrophobia never troubled him again. He was evidently right in believing that the long-forgotten incident was its cause. We cannot regard it, however, as, in itself, the entirely sufficient cause. He had had a number of serious illnesses in his childhood, both before and after the incident recorded, and the physical weakness caused by these may well have helped in the creation of the pathological fear. His earliest memory of this fear, before the recovery of its real origin, was of being very much afraid when compelled to sleep in a box bed next to the wall, his brother lying between him and the exit. He lay in this bed, night after night, wondering if he would be able to get out if the need arose, but afraid to move lest he should wake his brother. This was at the age of six. As Dr. Rivers says, it is probable that the phobia was accentuated by this experience and also that it was this experience which fixed the terror upon closed spaces rather than upon dogs. The patient does not remember ever having had any particular fear of dogs.

We do not know at what age the pathogenic experience was forgotten. The memory certainly remained with the patient for some time, for he remembered that, as a child, he was never able to pass the house again without fear.

First, then, it was the house which became the source of fear. A few years later the idea of being in an enclosed space whence he might not easily escape became the source of fear. We can readily understand that, if the memory of the early experience when shut in the passage with the dog persisted clearly in consciousness at the age of six—as we should expect such a memory of a child's fourth year to do—it might easily arouse thoughts of possible danger when he again found himself in an enclosed space with the way of escape blocked. The fear could then be aroused by association, *in consciousness* at that age, with the former terrifying experience. Later, however, when the original fright had been forgotten (even if not already forgotten at six) enclosed spaces still aroused the same fear. The fear, at this stage, was aroused by an association which was *unconscious*. Here, then, are two experiences; first, perception of his situation in an enclosed space from which exit might be difficult; second, a severe and irrational dread. The link between them is an association which remains unconscious. This is precisely the same phenomenon as we were confronted with in the case of Prince's patient suffering from a phobia of white cats. Both these cases confront us with the same two questions: 1. How can an association, which still has a sufficiently definite existence to function, remain outside of consciousness while it functions? 2. Is it mental or merely physical? Though remaining outside of consciousness, how can it function as a link between two experiences, unless it, too, be mental? To the first of these questions we shall endeavour to present an answer when discussing the phenomenon of dissociation. The second we must also leave for the present with the remark that here again we seem to be presented with a case of unconscious mental activity. That this view is not final, however, we shall endeavour to show in the sequel.

Before proceeding to discuss dissociation and repression and the theory of neurosis, it will, however, be well to have a few more actual cases in mind. The medical history of the Great War furnishes us with a plenitude of examples. The first is one recorded by Dr. William Brown, of Oxford:

"A gunner was admitted to the hospital where I was working, after he had spent two years in military hospitals of different kinds. He was suffering from a tremor of the right hand dating from a time when he had been blown up at Ypres. He did not remember anything more until he had reached hospital, and the memory of this interval had never been recalled to him by any of the doctors he had previously seen. I sent him to sleep [under hypnosis] —that took just about three seconds—and then suggested to him that he should live again through the experiences of Ypres. He did so and began to shout out all sorts of things which showed what had happened at the time. German shells were falling nearer and nearer to the gun-pit. He was apparently serving the gun and someone else was handing him ammunition, and this person had evidently lost his head, for my patient shouted out: 'What the —— do you mean by pulling the —— pin out of that —— fuse?' Then I noticed that he was moving the handle (to serve the gun) with his right hand: his hand began to shake violently, and soon he was shaking all over but especially in his right hand. Then he suddenly became absolutely still. I suggested to him that he would continue to remember all that he had just gone through and then woke him up. He looked at his hand, which was absolutely still, with amazement and expressed his gratitude, but his mind still appeared somewhat confused, so I told him to go and sleep it off. An hour later he came back and told me that he had not been to sleep, but that he had been thinking it all over. He knew everything that had

happened, and told me that he had not been suffering from shell-shock, but from gun-shock. His gun had been blown up. . . . The next morning he was able to shave himself with an ordinary razor, for the first time since his illness." [1]

A most interesting account of a similar, but more complicated, case is given by Professor J. P. Lowson, of Brisbane.[2]

The patient, an ex-soldier, came to Professor Lowson, in Brisbane, in a state of nervous collapse, and suffering from mutism and a lapse of memory. He brought a written statement regarding the onset of his immediate trouble, of which he had then no memory. While employed in charge of boilers at a mill the inspector had adjusted the safety valves, which caused them to blow off with a great noise. The patient finished the shift and started again the next day, but during the day asked to be transferred to other work. He was given charge of two engines and carried on there for five days, when he collapsed. He recovered consciousness that evening, but could only remember events up to 1918. The next day his memory came back to August 1920. There had been no improvement since.

Professor Lowson found that the mutism was due to an emotional spasm of the vocal cords which came on every time he endeavoured to speak. Four times since his collapse he had found his voice for an unintentional ejaculation but could not speak deliberately. Recovery of speech proved to be simply a matter of recovery of confidence. By dint of showing him first that he could breathe out the whispered sound "ah" he was led first to speak in a whisper and then in the ordinary way.

The patient's war history was then obtained. He had been blown up in 1917 on the Western Front and had been

[1] W. Brown: *Psychology and Psychotherapy*, p. 21.
[2] *Australian Journal of Psychology and Philosophy*, June 1924.

apparently unconscious for about twenty-four hours. When he woke up in hospital it was to find himself distressingly transformed. "He was desperately nervous, shaky, childishly incapable of controlling himself and perpetually subject to disabling headaches. . . . He was able to speak, but an emotional shock received on the train journey to the base, which in other circumstances would have been trifling, was now sufficient to deprive him of his voice. From this condition he gradually recovered without any special treatment, but had never become entirely himself again and suffered from continuous headache. He was discharged and went back to work. The noise and movement associated with engineering distressed him. He was nervous and full of morbid apprehensions, but, up to the time of the collapse described above, maintained his grip on himself, though often deeply depressed.

The day following restoration of his speech he looked and felt much better. The headache remained, but his memory had come back for everything up to the time of the collapse, except for the names of ports called at upon a voyage taken as engineering hand some time after August 1920. The voyage itself he could remember, including disagreeable experiences among the machinery, but of the ports there was no recollection; he could not even remember having been ashore, though he was sure that he must have done so.

Professor Lowson then hypnotized him and had him recount his experience in 1917 of the action in which he was blown up. By the time his narrative (told under hypnosis) had reached that incident he was vividly living through his whole experience again. There was no pause in the story after he had told of the explosion of the shell. He told how, on coming to earth again, he had lain paralysed from head to foot, terrified, unable even to open his eyes.

When stretcher-bearers came along they almost decided to leave him for dead. He was unable to utter a sound or give them a sign of life, though he heard them discussing whether they should leave him. Later, when one bearer suggested throwing him into the ditch for dead, he managed to move his fingers and, this being noticed, he was taken to the hospital. There a piece of shell was taken out of his head. (He writhed under hypnosis now at the memory of the pain.) A day later he awoke to the consciousness that he could open his eyes, move and speak, but with this recovery the memory of his harrowing experiences while apparently unconscious vanished like a dream.

In bringing him out of hypnosis care was taken that these memories should not be again lost. He then found that not only was his memory for the above war experience now clear, but that he could also remember the ports called at on the voyage of a few years before, and especially an incident at one port in which he had run some risk of losing his life. He could also remember what had happened between the recent boiler explosion and his partial recovery. All memory gaps were thus filled up. Two days later he reported that the persistent headache of six years' standing was gone and the nervousness and depression lifted. He was himself again. The cure was complete and appears permanent.

This case and the one recorded by Dr. W. Brown are alike in their essential features. In each there was a memory gap, and when this gap was cleared up the symptoms disappeared. This fact—the disappearance of disease symptoms following upon the recovery of memory of the events in which they seem to have had their origin—is the phenomenon to explain which the whole underlying theory of psychoanalysis has been constructed. Its importance for us at present is the demonstration it offers of the

persistent effectiveness in conduct of experiences which have been forgotten. Something that is unconscious still persists and has power to make itself felt. It may issue in some inexplicable action, as in the shake of the ex-gunner's hand ; or it may cause a headache, an emotional excitement which prevents speech, strange lapses of memory, mental depression, nervousness and exaggerated emotional responses to mild stimuli, as in the case of the Australian soldier.

Whether it be mental, physical, or psycho-physical, then, the evidence for the existence of a dynamic unconscious seems to be ample and varied. Our next problem is as to why this dynamic something, which has been and may again become conscious, remains, even while it functions, outside of at least the primary consciousness ? This is the problem of dissociation or repression. Before we enter upon it, however, we will do well to study another phenomenon which looms large in all discussions of psychoanalysis and one which will help us toward a solution of this question, the elusive phenomenon of the dream.

The modern literature on dreams is enormous, and we cannot attempt here to review even the chief theories. We shall content ourselves with discussing the most important and most widely accepted features of the principal theory : that of Freud. In particular the significant Freudian concepts of the " wish-fulfilment " and the " censorship " merit discussion. The facts underlying these concepts, at one and the same time, present the most conspicuous difficulty for our own theory, and, when explained, throw the most illuminating light upon it.

Freud believes that the cause of dreams is always a mental stimulus. If we feel inclined to ask how a mental stimulus can occur while we are asleep, i.e. unconscious, we must remember what we have already learned of

processes, apparently mental, certainly involving memory and intellection, which go on while the individual remains entirely unconscious of them. It is Freud's view that all dreams are caused by such unconscious processes; and further, that these are in each case of the nature of a wish of which the dream is the fulfilment.

This suggestion is likely to be immediately repudiated by the recitation of innumerable dreams which are utterly foolish, entirely unconnected with, or directly contrary to, the person's wishes, and even exceedingly painful. Professor Freud, however, must not be thought to have overlooked so obvious a fact as this. This objection will be found to disappear as soon as his theory is more adequately explained. But first let us notice that there are dreams of which this "wish-fulfilment" theory is equally obviously true.

There is an abundance of evidence that strong unsatisfied wishes of our waking life tend to produce dreams in which the wishes are fulfilled. Freud[1] declares that he can always produce a delightful dream of drinking water by eating a supper that will make him thirsty. Arctic explorers who have been short of food testify that under such conditions they dream regularly of eating. Dreams of letters from home also occupy a large place in the night fantasies of many men under such conditions. C. W. Kimmins, after an examination of nearly six thousand dreams of children, declares that: "Dreams of presents and eating, at all ages from nine to fourteen, are much more common with children from the poorer than from the well-to-do districts."[2] The dreams of young children, Freud says, are always simple wish-fulfilments, and he quotes a number of children's dreams in proof. C. W. Kimmins seems to agree, and says that, even between the

[1] *Interpretation of Dreams*, p. 104.
[2] C. W. Kimmins: *Children's Dreams*, p. 49.

ages of nine and fourteen, no less than 28 per cent. of the boys' dreams and 42 per cent. of the girls' dreams were found to be clearly expressed wish-fulfilments. If the reader's experience is the same as that of the writer, he will certainly agree that this is a far larger proportion than is found in adult life.

Here then, in certain dreams of adults and in the majority of dreams of young children, we have a type of dream that we can understand. They are, indeed, the only dreams that we can readily and completely understand. We notice that: 1. They are simple wish-fulfilments. 2. That they proceed from a mental stimulus, a wish, which accounts for them just as completely as the waking wish accounts for a daydream. 3. That these dreams are, as a rule, far more logical and sensible than is the usual dream. It is rather startling to discover that in their dream processes the minds of children are far more logical and sensible than are those of adults. This in itself suggests that in the adult dream something usually occurs to disturb the even working of the mind. This is Freud's hypothesis. It is surely sound policy to endeavour to explain the cases we cannot understand in the light of those we do understand. This, too, Freud does. All dreams, he says, are wish-fulfilments, but in most dreams, especially in adult life, something has occurred to distort the dream process.

Freud's method of recovering from the dreamer the unconscious material which he believes to underlie the dream is that of free association. Regarding the dream as a whole as a distortion, it is set aside as a whole. The dream story is of no value until he has found out what lies behind the different elements in the dream. So each element of the dream (each image, saying, feeling, etc.) is taken by itself and the dreamer is asked for his free associations about that item. The dreamer must then let his mind wander freely and uncritically about the idea of

the dream item being investigated. Associations may be slow in coming ; they may come quickly and abundantly ; whatever they are, they are carefully recorded. By dint of gathering together all the associations to every item in the dream the whole of the psychic material underlying the dream, Freud believes, can be obtained and the trained analyst, with a knowledge of the principles according to which dreams are formed and knowing also the history and character of the dreamer, can discover the nature of the wish which finds its fulfilment in the dream and the process by which the dreamer's experience has been distorted from a simple fulfilment of that wish to that which is found in the remembered dream.

This method of interpreting dreams must find its vindication in the success of its application. It is open to anyone to test it on his own dreams. This has been done by an increasingly large number of investigators, and, while many variants of Freud's theory are put forward, particularly of the view that the ultimate stimulus of the dream is always a wish, yet the essential claim, that dreams have an underlying meaning of significance in the mental life of the individual and that this meaning may be discovered by the method of free association, finds increasing confirmation.

The method is, of course, open to abuse. It has been rightly pointed out that one can read almost any preconceived theory into the interpretation of a dream and that six different interpretations of the same dream may be given by six different analysts. There still remains, however, a great bulk of evidence, in the shape of dreams the interpretation of which is convincingly clear. In almost every dream there will remain moot points upon which it is exceedingly difficult to dogmatize. It is these which allow for differences of opinion, even among careful interpreters. But on the main issue, that dreams are

significant products of our mental life the sources of which often remain unconscious, there is increasing unanimity.

As a simple example of a dream involving very little distortion we may take the following dream of a boy aged nine which was analysed by the writer :

" I dreamed that I had broken my club button and that I went to Mr. M. and he gave me another one."

The button was the badge of an organization the boy had recently joined. Mr. M. was the gentleman in charge who had given him the button. The analysis was brief, and proceeded as follows :

" What do you think made you dream of breaking your button ? What comes to your mind when you think of the broken button of which you dreamed ? "

" I did break the button two or three days ago : but I mended it myself."

" Well ! Is there anything else comes to your mind when you think of the broken button ? "

" Yesterday morning my brother and I were up early —before mother and father—and we broke a plate. It dropped on the sink. And we picked it up and hid the pieces behind the big creeper. And we didn't tell mother about it."

" Did that worry you during the day ? "

" Yes."

" What did you wish to do about it ? "

" I wished we hadn't broken it, or that we could get another one and put it back."

Knowing the child as particularly conscientious, and highly strung and sensitive, the writer felt sure that this was a true account of his state of mind during the day, and the explanation of the dream seemed plain. A guilty conscience and fear of discovery of the deceit had played on the youthful mind during the day, and the wish for power to restore the broken article had been strong. In

sleep this wish had found a symbolic fulfilment in the restoration of the broken button. The broken plate had called up, by association, the broken button. The restoration of this aroused no difficulty. He could always obtain another. It was typical of the whole attitude of the child to life at the time that, in the dream, instead of mending the broken button himself, he went to his superior for another. He was oppressed by a sense of inferiority mainly due to the development of a serious impediment in his speech. This had undermined his self-confidence. He was inclined always to lean on others. At school he always looked to his twin sister to speak for him.

The only remaining problem is as to the element of distortion, the replacement of the broken plate by the broken button. We can understand the thought (if we may call it a thought, though it was unconscious) of the broken plate calling to mind the broken button, for we have seen already that elements which remain unconscious can produce effects in consciousness (as when the answer to the sum appears in consciousness after having been worked out unconsciously in response to a suggestion given under hypnosis). But why did the persistent and worrying memory of the broken plate, though active enough to cause the dream, still remain unconscious? Further, why did the wish to restore the plate transfer itself to the button when the latter came into the dream consciousness? This is the problem of repression or dissociation and the problem of the activity of repressed complexes. Before going further with it we will enlarge our experience of dream interpretation by referring to two more examples and by a study of what Freud calls the "dream work."

For our second example we will take a dream recorded and interpreted by Freud.[1] The dreamer was a young girl,

[1] *Interpretation of Dreams*, p. 128.

one of his patients. She had become an orphan at the age of six and had been brought up in the home of her elder sister. This sister had two children, Otto and Charles. Otto had been the favourite of his young aunt, but had died. Since the death of this boy, the young lady had left her sister's home. She told her dream as follows :

" I saw Charles lying dead before me. He was lying in his little coffin, his hands folded : there were candles all about, and, in short, it was just like the time of little Otto's death, which shocked me so profoundly."

How could this dream possibly be a wish-fulfilment ? she demanded. " Am I really bad enough to wish my sister to lose the only child she has left ? Or does the dream mean that I wish Charles to be dead rather than Otto, whom I like so much better ? "

Freud assured her that this interpretation was impossible and, knowing the patient's history, was soon able to explain and convince her of the meaning of the dream.

While living with her sister she had formed an attachment with a gentleman who constantly visited the house, but just when it looked as if this relationship was about to culminate happily in marriage her sister, from some unknown motive, intervened and succeeded in separating the pair. " After the break," Freud writes, " the man who was loved by our patient avoided the house : she herself became independent some time after little Otto's death, to whom her affection had now turned. But she did not succeed in freeing herself from the inclination for her sister's friend in which she had become involved. Her pride commanded her to avoid him : but it was impossible for her to transfer her love to the other suitors who presented themselves in order. Whenever the man whom she loved, who was a member of the literary profession, announced a lecture anywhere, she was sure to be found in the audience : she also seized every other opportunity

to see him from a distance unobserved by him. I remembered that, on the day before, she had told me that the Professor was going to a certain concert, and that she was also going there, in order to enjoy the sight of him. This was on the day of the dream: and the concert was to take place on the day she told me the dream. . . . I asked her whether she could think of any event that had happened after the death of little Otto. She answered immediately: 'Certainly: at that time the Professor returned after a long absence, and I saw him once more beside the coffin of little Otto.' It was exactly as I had expected. I interpreted the dream in the following manner: 'If now the other boy were to die the same thing would be repeated. You would spend the day with your sister, the Professor would surely come in order to offer condolence, and you would see him again under the same circumstances as at that time. The dream signifies nothing but this wish of yours to see him again, against which you are fighting inwardly. I know that you are carrying the ticket for to-day's concert in your bag. Your dream is a dream of impatience: it has anticipated the meeting which is to take place to-day by several hours.' "

Our third example is a dream of Dr. W. H. R. Rivers which is exhaustively discussed in his last work, *Conflict and Dream*.[1] Dr. Rivers dreamed that he was in a Cambridge college garden—not the garden of any one college, but a kind of composite of the gardens of three colleges, of which Pembroke seemed the most prominent. In this dream he met his friend Professor X. and entered into a conversation with him. On leaving him he went toward a building with a vague idea that a meeting of the Council of the Royal Anthropological Institute, of which both he and Professor X. were members, was being held there. As he was entering the room he hesitated because it occurred

[1] Pp. 9 ff.

to him that they might be discussing some matter in which he was involved. On entering he found a number of people sitting around the room, only one of whom he knew. This man was reading a list of names of persons proposed as members of the council for the ensuing year. When the reader had finished he put the paper on the table, and Dr. Rivers leaned over to look at it in order to ascertain who had been nominated as President, knowing that that person's name would appear at the top of the list. There he read the name " S. Poole."

Thinking the dream over immediately after in the half-waking state, Dr. Rivers connected the name with Stanley Pool, the great bend of the Congo River, and with Professor Lane-Poole.

In analysing the dream Dr. Rivers tells us that he knew his own name would probably be considered for the position, and that he would have highly valued the honour had it been offered him. There were certain strong reasons, however, which led him to decide that it would not be wise to accept the position. He had previously discussed the matter with Professor X., and had informed him that he would prefer not to be nominated, for he doubted his own resolution to refuse if the position were actually offered him. The name S. Poole on the paper in the dream he felt sure was a transformation of his own name, a kind of pun upon it, such as had often been made. The " s " he concluded was simply the final letter in his own name transferred to the beginning and made to serve as an initial. This view was confirmed when he learned on inquiry that Professor Lane-Poole's Christian name was Stanley and found that, though he had no recollection of it, the name of " S. Lane-Poole " appeared in a catalogue of books which he had read some little time before.

The appearance oi his name, though thus transformed, as President of the Society, Dr. Rivers recognized as an

undoubted wish-fulfilment. The process seems to have been one whereby the name " Rivers " had called up by association the name " Poole " which had further called up by association the name of " S. Lane-Poole." Elements from both these associations were then extracted and fused in the name " S. Poole " which appeared in the dream.

These examples are sufficient to justify Freud's primary contention that there is more in a dream than the waking memory can easily divulge. Behind the manifest dream there lie numerous associations which, when gathered up, reveal a connection between the dream experience and forces operating in the person's waking life. In order to clarify this distinction between the dream as it appeared to the sleeper and that which lies behind it, Freud designates the former the " manifest content " of the dream and the latter the " latent " content. It is the " latent content " that gives us the meaning of the dream and enables us to relate it to the dreamer's life.

The chief problem for the further explanation of the theory of dreams is the question as to why the latent content does not itself become the manifest content. If there are wishes, thoughts, images, etc., which are the sources of the dream, why do they not themselves enter the dream consciousness? Why, to refer to our three examples, did not the boy dream that someone gave him another plate? Why did not the young lady dream that she had met her former friend at her sister's house? Why did not Dr. Rivers see his own name at the head of the list? What, in brief, is the reason for the distortion in dreams?

Freud's answer is that the chief factor at work in this distortion is what he calls the " Censorship." From numerous illustrations he points out that it is just the painful and shocking elements of the latent content that are left out of the manifest content. In our first example

it is the plate, the subject of many painful thoughts, that is omitted; in the second example it is the anticipated meeting with the lover—which, although so eagerly looked forward to, is something of which the young lady is ashamed and is associated with a part of her life which she is striving to dismiss; in the third example it is Dr. Rivers's election to the Presidency, a matter which he has deliberately decided to avoid, crushing strong inclinations to the contrary, but afraid of his own weakness if offered to him. Freud likens this process to the work of the censor who blots out the parts of an article or piece of news to which he objects. Thus the omissions in the manifest content are accounted for. The appearance of trivial and apparently unrelated images in the manifest content Freud accounts for by another process which has an analogy in the effects of the censor's work. Because of the supervision of that official the journalist tries to evade him by conveying his meaning in innuendoes and circuitous phrases and paragraphs. Similarly, says Freud, the "wish" seeks its fulfilment circuitously and in disguise. The real elements in the wish-fulfilment are not allowed by the censor to enter the dream consciousness, but associations of these elements are let through and are woven into the fabric of the dream.

Freud warns us against taking too literally and interpreting too anthropomorphically his analogy of the censorship.[1] We must not imagine the censor to be a little mannikin within the brain, and the wish another mannikin. The censor is rather a group of tendencies which, in the waking life, have control of the mind; and the wish is another tendency which, in the waking life, is repressed by the dominant group. The censorship and the effort to evade it are simply the interplay of these forces.

One other question regarding dreams calls for brief discussion. This is the problem of their purpose. Have

[1] *Introductory Lectures on Psychoanalysis*, p. 118.

they a biological value, or are they pathological? Freud's theory is that the purpose of dreams is to protect sleep. Sleep is threatened by the urgency of a wish demanding fulfilment. The dream gives to the wish a pseudo-satisfaction in hallucination. The wish is appeased and sleep continues.

On the theory of mental dynamics adopted by Freud, this view of the biological purpose of dreams is perfectly rational. He views the complex from which the wish proceeds as an accumulator of "Libido." The wish presses for fulfilment because the complex is full of stored-up energy. Unless that energy can be discharged, it will thrust the wish into consciousness and awake the sleeper to secure its fulfilment. The censor is scarcely strong enough to hold back the powerful interloper. It barely succeeds in thrusting away the naked wish. Then the wish assumes a disguise, slips past the almost exhausted censor, and discharges its energy by securing a hallucinatory and distorted fulfilment in the imagination of the sleeper.

If we accept the view of the complex as accumulating and discharging energy in this way, then the dream might well be regarded (as in Freud's view) as a safety-valve. But such a view of the energy of either complex or instinct we have already shown [1] to be entirely untenable. It is contradicted by too many of the facts of life. We must therefore find some other explanation of the fact, which we have accepted, that dreams are wish-fulfilments.

The explanation of the problem is to be found in the facts of the ordinary working of the mind. The mind works from the end to the means. Every conative process begins with attention to the idea (be it concept, ideal representation or meaningful percept) of the end toward which it moves, in so far as that end is understood. When a complex is aroused it therefore tends first to secure the

[1] Cf. Chapters VI and VII.

concentration of attention upon the idea of its end, its fulfilment. In the waking life, unless other motives lead to the rejection of the end, this results in processes of thought and activity directed toward the realization of that end. In sleep, because the motor apparatus is cut off, no such activity results, but because the critical consciousness, directed by the interests of the personality, is not active, the idea attended to appears in the dream consciousness with hallucinatory vividness.[1] This happens whether the ideas which the dream attention is called to bear upon are those of a genuine fulfilment of the wish or some distortion of it.

Our conclusion in regard to the purpose of the dream, then, is that it is the result of the normal working of the mind and brain as affected by the peculiar conditions of sleep. It cannot be said to have any biological value such as to protect sleep. Neither can it be said to be pathological except in so far as it may sometimes be a symptom of dissociated or repressed complexes, which are pathological. For our argument, however, the fact that dreams are wish-fulfilments certainly has a value. It bears out in excellent fashion the theory which we have put forward as to the place of the purposive consciousness in all activity.

The reader will remember that we have found in dreams the same two puzzling phenomena that we observed in the study of the Unconscious : (*a*) the working of processes, of a kind which are generally regarded as necessarily mental, which, though perhaps initiated in some actual conscious experience, go on now unconsciously ; (*b*) a process by which conserved experience, which is sufficiently definite to function and produce effects in a person's physical and mental life, is kept out of consciousness even while thus functioning. The former of these phenomena presents us with the problem of the nature of unconscious activity,

[1] Cf. note on hallucination, Chapter IX.

the second with that of the reason for its existence. This latter is the problem of dissociation or repression, and to it we shall turn our attention first. It is really only a part of the whole question of memory, but we will at present only enter on the discussion of this larger problem so far as is necessary as a basis for the explanation of those peculiar failures to remember which meet us in the study of the unconscious.

CHAPTER VIII

THE EXPLANATION OF THE UNCONSCIOUS

MEMORY may be considered as the process whereby past experience is registered, conserved and, in a certain sense, reproduced. Whether the medium in which the registration and conservation takes place is psychical or physical need not concern us here; they are parts of the total process which we simply assume in order to explain the experience of reproduction. The reproduction, it must be remembered, is not the same experience as the original. The memory of a burnt finger is, fortunately, something very different from the experience of burning it. It is a reproduction in somewhat the same sense as a picture of a landscape is a reproduction of the original mountains and trees. But even such reproductions of experience as we have in memory must depend upon the registration of that experience in some relatively permanent medium and upon the conservation of that registration. If any of the three processes should fail, then memory fails, for memory is a chain of processes every link in which must be intact if the end result is to be obtained.

For the study of the process of dissociation or repression it is important to distinguish between two kinds of forgetting or failure of memory. This has been clearly pointed out by T. H. Pear in a contribution to a symposium on "The Rôle of Repression in Forgetting" published in the *British Journal of Psychology* for September 1914. The first is a forgetting due to a failure in "conservation," which may in turn be due to an inadequate "registration." This is the gradual fading from the mind of things once known, and is due, it will be almost universally agreed, to the

plasticity, and therefore limited retentivity, of the brain as the organ of mind. This, however, is not the kind of forgetting which constitutes the problem before us. The second type may be illustrated by the forgetting of the name of a person or place familiar enough to us. It is a more or less temporary forgetting. The experience has been adequately registered and fully conserved, for it comes back to us clearly on some later occasion. It is a failure of the process of " reproduction."

Even in cases of this second class we may distinguish between two further types of forgetting. Some things are forgotten for the time, but a little effort of attention in thinking round them will bring them back, or they return to us spontaneously at some later time. Others can only be recalled by some special method such as hypnosis, automatic writing, or the " free association " method of psychoanalysis. Once recalled in this way, the second class may be as clear and convincing as the first. This latter distinction is only one of convenience. There is probably no fundamental distinction between these two types of the second kind of forgetting ; the only difference is in the difficulty of reproduction. It is this failure to reproduce that which has been adequately registered and is still conserved which constitutes the fact of dissociation or repression.

Of these two terms, " dissociation " and " repression," which we have hitherto used synonymously, the former is to be preferred. The term " repression " is too loosely used. It is used of the deliberate effort to keep certain ideas out of one's mind, of the inhibition of impulses and desires, and of the curbing of the natural impulses of an individual by a second party. It also carries with it too strong a suggestion of a metaphorical description of the unconscious which is apt to be misleading—the metaphor of " the conscious " and " the unconscious " as the upper

and lower stories of the mind. The term "dissociation" much more neatly describes the facts. Experiences are recalled by a process of *association*. If they are conserved but cannot be recalled, it is because they are "*dissociated*." Some writers, notably Rivers and McDougall, have given to the term other, narrower connotations. But the word seems to us to be too valuable to be thus confined.

We have already seen ample evidence of this process of dissociation in the facts of unconscious process and in the censorship of dreams. We have next to ask the reason of it. Freud's theory is that it is always the painful elements of experience that are thus dissociated, and he believes that they are cut off from experience for no other reason than that they are painful. He has written a whole volume [1] to show that when any name, word, etc., is thus temporarily forgotten it is always because of some painful associations to it. Ernest Jones formulates the Freudian theory as follows:

"There exist in the mind certain inhibiting forces which tend to exclude from consciousness all mental processes the presence of which would evoke there, either directly or through association, a feeling of 'unpleasantness' (*Unlust*). It is, of course, evident that the efficacy of such forces is at best a relative one, for otherwise consciousness would never experience 'unpleasantness'; but the thesis is maintained that, whenever this experience occurs it is only because the action of the forces in question has first been neutralized by other tendencies and motives in the mind, whether volitional or not." [2]

"The main fact that this [Freud's] theory sets out to explain is that it is more difficult to recall an unpleasant memory than a pleasant one, other things being equal. The fact itself is, I think, beyond dispute, and has not been

[1] S. Freud: *The Psychopathology of Everyday Life.*
[2] *Papers on Psychoanalysis*, p. 104.

questioned by anyone who has seriously investigated the phenomenon either experimentally or clinically. According to the repression [what we have called " dissociation "] theory, the reason why it is more difficult to recall an unpleasant memory is because it is kept back from entering consciousness by the action of certain inhibiting, ' repressing ' forces, the function of which is to guard consciousness, so far as possible, from the pain of disagreeable affects." [1]

This theory of dissociation is, I believe, altogether too simple. If it were true, its biological effect would be disastrous. It is even more important to man that he should remember his painful experiences than his pleasant ones. The instinctive reactions of animals are largely modified by their memories of painful experiences. Whether they are more readily modified by pleasurable than by painful experience it is not possible to discover, on account of the impossibility of equating the strength of the two stimuli. It may be true, as Hingley says, that " we learn more by succeeding than by failing " ; [2] but in the learning of what *not* to do it is on our painful experience (or other people's) that we depend.

We need not, however, depend on the biological argument as to the utility of pain to show that this portion of the Freudian doctrine is unacceptable. It has recently been very thoroughly tested experimentally. The question is whether, as Ernest Jones says, " It is more difficult to recall an unpleasant memory than a pleasant one." Dr. A. Wohlgemuth, in his *Critical Examination of Psychoanalysis*,[3] discusses in some detail a number of experiments, including some of his own, which have been made to test this question. We will endeavour to summarize the most important of these.

Kowaleski made 105 boys write down all the pleasant

[1] *Papers on Psychoanalysis*, p. 106.
[2] R. H. Hingley: *Psychoanalysis*, p. 121.
[3] Pp. 32 ff.

and all the unpleasant experiences of the previous day, a holiday. Ten days later they were told to write them again. The thirty-seven boys of the youngest group remembered 1½ per cent. more of the unpleasant than the pleasant. The fifty-two boys of the middle group remembered 7 per cent. more unpleasant than pleasant. The sixteen boys of the oldest group remembered 5 per cent. more pleasant than unpleasant.

In a similar experiment carried out by himself, with the co-operation of school-teachers, with 687 children between the ages of eleven and sixteen years, Wohlgemuth obtained the following results:

(*a*) The whole of the results pooled.

Pleasant experiences recorded in first paper: 6,735.
Pleasant experiences forgotten in second paper: 2,700 = 40·1 per cent.
Unpleasant experiences recorded in first paper: 3,491.
Unpleasant experiences forgotten in second paper: 1,406 = 39·8 per cent.

(*b*) The percentage worked out for each child separately gave:

(1) An average for pleasant experiences forgotton of 38·2. An average for unpleasant experiences forgotten of 35·3.
(2) A mean for pleasant experiences forgotten of 37·5; and a mean for unpleasant experiences forgotten of 33·3.

(*c*) The number of children who forgot—

a larger percentage of pleasant experiences was 345;
a larger percentage of unpleasant experiences was 280;
an equal percentage of both experiences was 62.

These results seem to show that there is no such general tendency, as psychoanalysts have assumed, to forget the unpleasant. The pleasantness or unpleasantness of an experience probably has nothing whatever to do with our

remembering it except that both may serve to rivet attention upon it and thus register it more firmly. Mere hedonic tone, however, has no effect upon readiness of reproduction. This is in complete accord with the view of the ordinary man, who always meets with incredulity the assertion of the "new" psychologist that we all tend to forget most easily our painful experiences. It is contradicted by his everyday experience. If it be asked how we may account for the enormous number of instances accumulated by Freud and others, of forgotten names, words, duties, articles, occurrences, etc., which have been found, on analysis, to have unpleasant associations, the answer is that unpleasant associations can be found equally readily, by the same method of free association, to any other name, word, duty, etc. We have only to let our minds wander a little time to find some association quite unpleasant enough to convince a Freudian that it is the reason of our forgetting.

Since we cannot explain dissociation by the mere fact that dissociated experiences are uniformly found to be unpleasant, we must cast around for some other solution of the problem. This, I believe, we can find in long-recognized facts of the despised traditional psychology. The first of these is the fact that the field of consciousness is not all equally distinct. Attention comes to a more or less complete focus upon certain objects in that field. Of the rest we are only dimly conscious. Stimuli may awaken this marginal consciousness without eliciting consciousness of a definite object as, e.g., does the striking of a clock when one is absorbed in reading. Yet the strokes are not altogether unheard, for if someone, a few minutes later, asks the time we may have a fairly definite impression that it is, say, three o'clock, even though we have no recollection of having heard the clock strike. The second fact is that of the selective activity of attention within this field of

consciousness under the impulsion of certain dominant interests, moods, and habits of thought. Some things will surely be noticed (come under the focus of attention) every time they come anywhere within the field of consciousness. Others will as surely be passed over.

The older psychology made the mistake of thinking that the passing over, by attention, of an object within the field of consciousness is always due to comparative lack of interest. The new psychology, led by Freud, assumes that it is because these objects are painful. Neither explanation fits the facts, for we have seen from the cases of dissociation already studied that memories of absorbing interest are thus shut out of consciousness, while painful memories are as readily reproduced as pleasant ones.

The explanation of dissociation probably lies in the fact that the dominant interest of the moment tends to absorb attention; not merely in that other things are excluded for lack of room, but also in that things contrary to that interest are specially guarded against. It is not true of consciousness as a whole that it possesses a censor which shuts out from it everything painful to it. But it is true of every particular interest which for the time may dominate consciousness that it works in a manner somewhat analogous to Freud's censor; it tends to direct attention away from everything that is contrary to it. Things forgotten in this way are, of course, painful, but it is not merely because they are painful that they are forgotten. They are forgotten because the dominant interest of the moment directs the mind solely to things in harmony with it. It is notorious that people fail to recollect facts that are out of harmony with their argument or to see the significance of them if they are brought under their notice. A dominant life interest may send a man through life blind to one side of the world. Not only so, but two very strong, but opposing, interests may divide a man's life between them and never

be allowed to come into conflict, because never thought of together. They form what have been called " logic-tight " and " emotion-tight " departments of his mind. For his private life and family relationships a man may accept the ethical teachings of Christianity and be splendidly influenced by them. But in his business relationships he may be a different man, entirely forgetting them and uninfluenced by them in any way. Yet he may never realize his inconsistency. Whichever interest for the time occupies his thoughts directs attention only to those ideas which are in harmony with it and shuts out all others. The result is that the two contradictory sets of sentiments and beliefs, which are effective each in different spheres of his life, never enter clear consciousness together, and the contradiction is never clearly seen. In a similar way a Socialist may, without realizing his inconsistency, preach liberty, equality and fraternity at every union meeting and every Sunday afternoon demonstration and yet allow no liberty of opinion among his fellows and no equality in his home, and practise no fraternity that ever requires any sacrifice.

In the numerous cases of forgetting quoted by those who accept the Freudian view of the effect of pain on memory, wherever the painfulness of the forgotten circumstance or its associations is clearly demonstrable it will be found to be of this type—painful because opposed to the dominant interest of the moment. Freud's illustrations in the *Psychopathology of Everyday Life* are not the best for the purpose of demonstrating this, for they are chosen with a view to demonstrating the effect of unconscious complexes upon the workings of consciousness, and the connection is therefore usually uncertain and far-fetched. We will take instead the interesting examples given by R. H. Hingley, a careful observer and clear-sighted exponent of psychoanalytic doctrine. The first is one quoted from Ernest Jones :

"An instance, which is hard to credit, though I can vouch for the accuracy of it, was related to me by a medical friend. His wife was seriously ill with some obscure abdominal malady, which might well have been tubercular, and, while anxiously pondering over the possible nature of it, he remarked to her: 'It is comforting to think that there has been no tuberculosis in your family.' She turned to him very astonished, and said: 'Have you forgotten that my mother died of tuberculosis, and that my sister recovered from it only after having been given up by the doctors?' His anxiety lest the obscure symptoms should prove to be tubercular had made him forget a piece of knowledge that was thoroughly familiar to him." [1]

Obviously, the husband's dominant interest was not so much to discover the nature of the malady as to prove that it was nothing serious. This interest, therefore, completely passed over the significant circumstance of the disease in the family. It was not in the interest of the interest (if we may be permitted a pun) to remember it. A similar example of overlooking an important fact in diagnosing an illness Hingley records from his personal experience:

"A few months ago my baby boy showed signs of digestive disorders. As these continued for some time, my wife and I discussed carefully all the changes that we could remember having taken place in his dietary about the time of the onset of the trouble. Finding nothing that could account for it, we set it down to some change in the quality of the milk he was getting. But as the trouble showed no signs of improving, the doctor was called in. He was unable to suggest the cause until just as he was about to leave it occurred to my wife to mention that she had been giving the child rusks to eat. At once it was suspected that he had been swallowing these without

[1] R. H. Hingley: *Psychoanalysis*, p. 120.

proper mastication, and subsequent events proved this. But why did it not occur to either of us to mention the rusks when we were considering the details of his food? The answer to that question, we both recognized, was that we were pleased to think that he was now able to eat solid food, and it was much easier to give him a rusk than to prepare his liquid refreshment." [1]

Apparently, so long as the malady was not serious, it was felt by both parents as a personal inconvenience more than anything else, and the interest lying behind the effort to discover the source of the trouble was mainly the desire to overcome a source of inconvenience. That interest, therefore, never directed attention to those very convenient rusks. It was not until, the doctor having failed to diagnose the trouble, the mother became really concerned for the child that attention was directed to the item overlooked when the other interest was dominant. We pass on to the next example:

"For some time I have been running over my recent experiences to find some further material to illustrate this chapter [on "The Psychopathology of Everyday Life"]. I could think of nothing suitable, but all the time there is one incident which I might have been expected to recall at once. Only a week or two ago I left a bag of valuable books and a parcel of my wife's on the platform of a certain railway-station. But why did this incident, which caused me considerable concern at the time, elude me when I was looking for such instances? The reader may have the facts and draw his own conclusion. After the event, being interested in the causes of forgetting, several times I have asked myself, Why did I forget that bag? But I could discover no reason. *The incident apparently did not fit in with the theory which I wished to demonstrate, and so I failed to recall it in this connection.* I have again submitted

[1] R. H. Hingley: *Psychoanalysis*, p. 160.

this incident to examination with a view to discovering why I left the bag and the parcel. The more I think of it, the more I feel convinced that the answer is to be found in this direction. I was returning with my wife and child and maid from my holiday. For some time we had been cooped up in a stuffy compartment. I couldn't stretch my legs and I couldn't smoke. We had the usual holiday impedimenta—boxes, bags, etc. When we changed at a certain station on the journey we had to show our tickets. To do this I was compelled to put down the bag of books and the parcel I was carrying. I produced the tickets, then lit my pipe, and went off in search of the heavier luggage that was to be placed in the guard's van, leaving behind the things that I was carrying. The forgetting was apparently motived by a selfish, but unconscious, desire to be free from the impedimenta which family travelling involves." [1]

With the explanation of the forgetting of the incident we can entirely agree. The interest which dominated Hingley's search for examples was not that of finding material from which to draw conclusions, but that of finding material to illustrate a conclusion already adopted. That interest, therefore, failed to direct attention to the incident which it had been previously decided did not fit the theory. The explanation of the forgetting of the bag and parcel probably needs a little modification. We cannot be sure of our interpretation of it in the absence of data informing us as to the particular interest dominating Hingley's mind at the time when the articles were forgotten. His own explanation suggests that this interest was strongly toned with a rejoicing at his new freedom from the disagreeable confinement of the "stuffy compartment" with its "holiday impedimenta," and perhaps this is sufficient to explain why his attention did not return to the bag and parcel.

[1] R. H. Hingley: *Psychoanalysis*, p. 123.

The same difficulty in regard to lack of material presents itself if we attempt to analyse the fourth example which Hingley gives.[1] Those already dealt with, however, are sufficient to show that interests have this negative effect of keeping contrary material out of consciousness. This is the element of truth which has lent colour to the Freudian theory that all painful experiences tend to become "repressed," for such experiences are, in a sense, painful. In an inquiry such as that of Wohlgemuth, however, the result would not be likely to be affected by forgettings of this character, for the child's eating rusks and the possession of valuable books and a parcel might well be reckoned among the pleasant experiences forgotten. The truth of the matter seems to be that it is not the pleasantness or unpleasantness of a fact or experience in itself that tends to make us forget it—experiences of a high effective tone are probably more easily remembered than others—but rather that the facts and experiences which tend to be "unaccountably" overlooked are those of such a nature that it is not in the interests of the dominant mental tendency of the moment, or of the personality as a whole, that they should be remembered. This conclusion opens up to us the possibility of explaining, in a more satisfactory way, the phenomenon of dissociation which we have seen in cases of neurosis and in the censorship of dreams.

In dream censorship, then, we must see at work some interest dominating the dreamer's mind and capable of turning the dream attention away from all elements contrary to it, thus shutting them out of consciousness. But, it will be objected, the dreamer is conscious of nothing but his dream; how can there be an interest dominating his mind of which he is not aware? This is the problem of the nature of unconscious processes. But we are not ready for it yet. Either this censoring interest exists and

[1] R. H. Hingley: *Psychoanalysis*, p. 37.

functions during sleep in some unconscious substratum of the sleeper's mind or it is a mere physiological after-effect of the interests which dominated the waking life. Which is the more probable hypothesis we shall inquire later. Meantime, let us see how our theory fits the cases already discussed.

The boy who dreamed of the broken club button was, as has been mentioned, a particularly sensitive and conscientious child. He had just joined an organization which put before him a high moral standard, and this he was taking very seriously. In hiding the broken plate he had fallen below his standard. The dominant interest of the day was an effort to restore his own self-respect, to think of himself still as the worthy lad he had set out to be. At the same time there was a strong desire to restore the broken plate. This wish was, apparently, about to achieve an imaginative fulfilment in the dream, but the dominating interest of the effort to restore his self-respect refuses to allow the dream attention to dwell upon the broken plate with all its contrary associations. The plate, therefore, never clearly enters the dream consciousness. It, however, forms an association with the memory of the broken button. This memory being stimulated, and there being no opposition to it from the dominant interest which had shut out that of the broken plate, it comes within the focus of the dream attention and the wish finds its fulfilment in the restoration of the broken button.

Besides the problem of unconscious processes and the question as to why the dream always takes the form of a wish-fulfilment this explanation of dreams leaves us with another problem: How is it that the wish is apparently satisfied with a mere symbolic or distorted fulfilment—e.g. a restored button for a restored plate? Or, to put it another way, how can the energy, or urge, of the wish to restore the plate, being denied its literal imaginative

fulfilment, become transferred to some only casually or symbolically connected object and proceed to work its end with that? To all three of these questions we shall be able to find answers if we carry a little farther our study of the phenomena of suggestion. But first let us apply our theory, as thus far worked out, to the other cases already quoted.

Both the other cases are instances of a decision deliberately made, and therefore motived by a dominant group of interests, acting as censor. In the dream interpreted by Freud the young lady's impatient desire to meet her former lover is pressing for a dream fulfilment. But in her waking life she has been fighting for sufficient self-control to overcome the attraction of this old attachment. This fight to be master of her own soul is the dominant interest of her waking life, and still in sleep its power is sufficient to turn attention away from the thought of the young man. But the dissociated image of a meeting with him, which has been stimulated but not attended to, rouses the memory of the former precious meeting beside the coffin of her nephew. Images of this incident flash then into consciousness, but the picture of her lover is still exorcised, and by the process of rationalization or secondary elaboration the dream experience is made more real and is harmonized with the future reference of the wish by making it seem that it is the body of the second nephew that lies in the coffin. In the "Presidency" dream of Dr. Rivers the deliberate decision not to accept the office similarly effects the censor's duty. The name of Rivers is cut out of the dream and a name which is a combination of associations to his own name appears in its place.

An interesting feature of the working of the censorship is that while in our dream-life a more or less distorted fulfilment may be obtained by wishes which would be allowed no fulfilment at all in our waking life (as in the

" Presidency " dream), yet elements are shut entirely out of dreams which are constantly attended to (unpleasant though they be) in our waking life, as were the broken plate and the former lover in the other two dreams. The censorship is neither stronger nor weaker than the inhibitions of waking life ; it merely works more automatically. It unconditionally slams the door in the face of everything contrary to the ruling interest of the conscious personality, but it just as unintelligently leaves it wide open for every other stray stimulus to wander in. It is a blindly automatic continuance of the attitude of hostility adopted by consciousness, working peremptorily and unintelligently. Similarly unintelligent is the wish which finds its fulfilment in dreams : desiring to see the name " Rivers " at the head of the list but thwarted, it puts the next name to hand there instead : desiring a meeting such as took place at a funeral, but thwarted, it creates the image of the funeral without the meeting. The only thing at all intelligent in the dream process is the process of rationalization or secondary elaboration whereby heterogeneous associations and stimuli, which have been thrust upon the transient dream consciousness, are woven into some semblance of rational order. This must be due to the unconscious working of constructive imagination.

The fact that in sleep the wishes and inhibitions of the waking life work thus crudely and automatically will help us to understand the phenomenon of dissociation in its pathological manifestations.

There is a close analogy between neurosis and dreams. In both something is shut out of consciousness but is still active. In dreams it is shut out of consciousness because it is contrary to the interests of the waking personality. We have seen, too, that even in waking life a dominant interest can withhold attention from some awkward fact. The only difference is that when sleep has impaired the full

normal working of the mind this process becomes more rigid and automatic. Now it is a predisposing condition of neurosis that the full normal working of the mind shall be impaired. This impairing of the mind is always the result of mental conflict. It may be the strain and horror of war with its awful conflict with fear. It may be some distressing worry of civil life or a conflict within the self over some issue such as one of those arising out of sex. Sometimes the shock of an accident may bring the strain to breaking-point. Whatever the cause of the struggle, if it be too long-continued or too severe, then at last the overburdened mind loses its grip upon all the conflicting threads of its problem. The dominant interests of the personality simply shut the contrary elements out of consciousness. So long as the person is awake, attention is dominated by those interests which have come to mark the personality, and these, unable to harmonize the contrary elements within the personality, automatically withhold attention from them. In the distressed mind this process of censorship works as effectually as in sleep. In future the only expression those contrary elements can obtain is a distorted expression in a dream or some equally distorted expression in a neurotic symptom.

Dissociation, however, may be overcome. Sometimes, in the interpretation of dreams, as we should expect with the above explanation before us, the forbidden memories can be recovered. Sometimes, too, in hypnosis they can be brought to light, and still more often by the slower but surer method of free association. The hypnotist's suggestion that the patient shall remember may sometimes have sufficient power to overcome the automatic dissociation. Sometimes it has not. Freud found that examination of his patients under hypnosis would often carry him a certain distance, but there it would stop. He then adopted the method of free association, instructing the patient to

uncritically relax his mind and simply to talk, uttering everything, without reserve, that came into his mind. By this method Freud found that first one and then another, until at last all, of the lost memories would be recovered. How, we may ask, does free association overcome dissociation? The answer is that in free association the mind is relaxed. So long as attention is deliberately guided it is guided by the dominant interests of the personality and nothing is recovered. But when the mind is relaxed and allowed to wander without any criticism of its wanderings, the dominant interest being merely that of discovering something new—and even that not allowed to influence the mind's wandering—then there may come into the border-line of the relaxed consciousness the memory that has been dissociated; ordinarily attention would be immediately diverted elsewhere; but now the dominant interests are dispersed and, though they have so shaped the brain as automatically to divert attention from this thing, the searching interest which motives the whole process seizes upon the resurrected memory and drags it into the clear light of consciousness.

The explanation of dissociation and of reassociation is therefore found to lie in the working of the mind's interests. With this problem out of the way we are now ready to turn our attention to the problem of the nature of the unconscious processes which we have observed as affecting so many departments of our mental life. Our greatest help in this will come from a further study of the phenomena of suggestion. From those phenomena, along with facts from other sources, we have already learned of the place of expectation in the initiation of action and of its power even over physiological processes which are not under the direction of the ordinary conscious will. But the study of suggestion yields a still more significant fact. It is this: *With the passing out of consciousness of the idea, expectant*

attention to which has initiated a process, that process does not necessarily cease. The follower of Coué's method formulates his evening autosuggestion, filling his mind for the space of about two minutes with the idea of "in every way getting better and better"; then his thoughts pass on to dwell for a time on other things, and presently he drops off to sleep. During the night his mind may be occupied with dreams. In the morning he formulates his suggestions once more and then busies himself with other things throughout the day. Each day he does the same. But the process started by the first formulation of the suggestion, and given fresh impetus by each succeeding formulation, goes on all the time. It is impossible to believe that the results achieved are due to physiological changes which occur during the two minutes, night and morning, while the mind is occupied by the idea conveyed by the haunting formula. The process of healing has been initiated while the idea was in consciousness. It goes on "subconsciously," as Baudouin would say, after the idea has been forgotten.

If there is still any doubt upon this point—if some are inclined to believe that the whole effect of autosuggestion is wrought during the two minutes twice a day during which the suggestions are actually being formulated—such doubts should be dispelled by a consideration of the effects of spontaneous suggestion. Baudouin[1] tells of a Geneva girl who was being treated by himself and Pierre Bovet concurrently with autosuggestion and psychoanalysis. One morning she fainted, though this had not occurred for several years previously. There seemed no explanation of the fainting until, under analysis the same day, she remembered a dream of the night before, that her father had fallen down in a fainting fit. One cannot doubt the connection between the dream and her own fainting. But

[1] Baudouin: *Suggestion and Autosuggestion*, p. 111.

here the suggestion of fainting produced its effect some time after it had been forgotten.

To take another illustration: Baudouin [1] records the case of a lady who told him of the following experience: On rising one morning she noticed through the open window that the sun was shining brightly, and the welcome sight made her immediately feel cheerful and warm. She put on light clothing and went about her work with bare arms, feeling quite warm and comfortable. Some little time later, on going to the window, she noticed that it was snowing. She glanced at the thermometer and realized that the winter had set in. Immediately she felt cold, her teeth chattered and she began to shiver.

Evidently the effect of the suggestion of warmth initiated by the sight of the sunshine did not pass away when the lady's mind became occupied with other things. It was not until that suggestion was counteracted by the conviction that it was really cold that it ceased to be effective. These examples could be multiplied indefinitely. The effect of a suggestion which has once begun to operate does not necessarily cease when the idea which initiated it passes out of consciousness and ceases to be attended to. The process, once initiated, may go on unconsciously.

It was Coué's conviction that a mysterious factor called the " subconscious " carries on this work. Baudouin goes to great pains to show that the practice of Coué's method results in a mild form of autohypnosis which he regards as an " outcropping of the subconscious," and he advises the practising of the art of relaxing the attention and the cultivation of the fine arts as methods of " educating the outcropping." The theory is that in autosuggestion according to the Coué formula the idea of betterment is put into the " subconscious mind," which tends to " outcrop " in consciousness under such conditions, and that

[1] Baudouin: *Suggestion and Autosuggestion*, p. 58.

once this " subconscious mind " has laid hold of the idea it proceeds to work it out irrespective of whether consciousness continues to dwell upon it or not.

Apart from the mystical haziness of the notion of a subconscious mind there is one very serious objection to this theory. It does not account for certain spontaneous suggestions. Baudouin pays a great deal of attention to spontaneous suggestion and gives many examples of it. He explains them by showing that attention, vivid and unembarrassed by contra-suggestion, has been concentrated upon a certain idea and that idea has forthwith proceeded to realize itself. That explanation we have accepted. But such attention is usually the attention of the clearest and fullest consciousness. There is no " outcropping of the subconscious " in the case of the lady who saw the sun in the morning and went cheerfully about her work until she saw the snow. In such cases as this the process of effective suggestion is initiated by an act of clear attentive consciousness. It goes on after the original idea has passed out of consciousness. By what agency, we must ask, is this work continued? The process, though initiated in an act of consciousness, is a purely physiological one. It is stayed again, later, in a further act of consciousness, when the lady sees the snow and reads the thermometer. Is there any need to suppose that in the meantime the dynamic and control of this process has been taken over by a secondary consciousness, a " subconscious "? Surely the plain meaning of the phenomenon is that a neurological and otherwise physiological process, once initiated in an act of consciousness, will, unless negatived or counteracted in some way, go on fulfilling itself even after attention has been withdrawn from the idea in the service of which it was started.

The hypothesis of a subconscious mind seems, therefore, to be quite unnecessary for the explanation of the continued

effectiveness of spontaneous suggestions, and even constitutes a difficulty if it be regarded as playing any necessary part in their initiation. We may next ask, then, whether the success of Coué's method of reflective suggestion, which is founded upon this hypothesis, gives it any better support.

The value of Coué's method rests mainly in the fact, as we have pointed out, that it secures expectant attention to a *single* idea, thus initiating a suggestion and eliminating contra-suggestion. Perhaps also it possesses a value distinctly its own. This we would suggest in view of another fact which will be made patent when we find an answer to another question which might be raised as an objection to the theory put forward here. This is the question as to why some ideas continue to realize themselves after they have passed out of consciousness while others do not. We have referred to two cases of spontaneous suggestion where the suggestion became effective or remained effective after it had ceased to be the object of attention. Cases are still more numerous where the suggestion ceases to be effective as soon as attention passes from it. The fall due to vertigo is a typical example. Immediately the person can turn his attention away from the idea of falling he regains his balance. The nausea of the Englishman who tastes his first dish of frog's legs or edible bird's-nest is another example. As soon as he ceases to think of what he is eating the nausea passes and he probably begins to enjoy the dishes. What then, we must ask, is the reason for this difference? Why do some suggestions, like those of Coué's method and certain spontaneous suggestions, continue to be effective after attention has passed from them, while others are only effective while they are actually attended to?

In the first place it must be noted that a suggestion ceases to be effective when counteracted. When the

climber ceases to think he is likely to fall, and thinks of his climbing instead, the idea of falling is negatived; the suggestion is counteracted and the tendency to fall ceases. When the lady who was convinced by the sight of the sunshine that she would feel warm turned her attention to her dressing and her duties, the idea of warmth was not negatived. She ceased to attend to the idea. It must at times have passed completely out of consciousness. But it was not negatived until the sight of the snow and a glance at the thermometer convinced her that it was cold. The earlier suggestion ceased to be effective immediately it was thus negatived, and she felt the cold which formerly the suggestion of warmth had prevented her from feeling. The suggestions, therefore, which continue to be effective after attention has passed from them are suggestions from which attention passes without negativing them as it passes away. Before these suggestions are negatived, and therefore before they can be made to cease to be effective, attention must come back to them. To stay a process of suggestion, attention must negative it either before, or as, it passes away from it, or must later return to that original suggestion, i.e. bring it back into clear consciousness, and negative it. This conclusion is of great significance for the theory of neurosis.

We can now see a certain peculiar value in Coué's method. When properly performed by one practised in the method the suffusing of the relaxed mind with the monotonously repeated rhythmical jingle of the formula produces a slight degree of hypnosis. From this condition the mind comes out and attention turns to other things without having negatived the idea of expected improvement upon which it had been fixed. Very soon after, attention may wander to contrary thoughts and counter-suggestions may be set up; but, so long as attention does not return to the hypnoidal experiences in which the autosuggestion was formulated

and negative that suggestion, it remains active. If the person drops off quickly to sleep, then the probability is that the suggestion will remain un-negatived and work through all the precious silent hours. The value of the semi-hypnotic effect of Coué's method rests, then, not in a forming of contact with, and initiating of a process in, a mysterious subconscious mind, but rather in the following simple facts: 1. It secures a period of undivided expectant attention to the idea of the desired end. 2. It facilitates the passing of attention away from that idea without negativing it. 3. It formulates the suggestion under conditions such that attention does not readily return to the experience and negative the idea.

The conclusions of significance for psychological theory which we have obtained from this study of effective suggestion may now be summed up as follows: 1. An idea of action or physiological process expectantly attended to tends to realize itself. 2. If the process initiated in this way is not negatived before attention passes from it, then it goes on automatically and will continue its activity until attention returns to that idea and negatives it. 3. This automatic and unconscious process does not necessarily involve us in the hypothesis of a subconscious mind or secondary consciousness. In some cases, at least, we have seen that it is much more reasonable to suppose that a neural process, initiated in an act of consciousness, continues to go on as a purely neural and physiological process, devoid of consciousness, after it has ceased to occupy attention.

These facts lead us to put forth the hypothesis that *all unconscious processes are purely physiological continuations of neural processes initiated by expectant attention and then dissociated.* To maintain this hypothesis we must show: first, that all so-called unconscious or subconscious or co-conscious mental processes have been initiated in an act of

expectant attention and that this experience in which they were initiated has been dissociated; second, that they are such processes as may go on in the automatic working of an existing mechanism, i.e. that they are not such as require any fresh adjustment of conative tendencies.

It is impossible, of course, to examine all cases of such processes in this way. We will content ourselves with showing that these conditions hold good of the cases thus far quoted and by indicating, in a brief discussion of the methods of psychoanalytic therapy, that our theory fits the facts definitely ascertained in that field also.

In Morton Prince's case of automatic writing we have a memory, adequately registered and conserved, but dissociated, so that even under hypnosis it cannot be reproduced. The activity of this dissociated experience in the lady's later life is easily explained on our theory. The suggestion had been strongly impressed on her child mind that a white cat is a source of danger and an object to be eared; and this suggestion, though dissociated, continued to be active until brought back into the attentive consciousness and negatived. The explanation of the actual unconscious reproduction of this forgotten experience in automatic writing is similar. The experience was so completely dissociated that, even in the state of hypnosis, attention was prevented from dwelling upon it. But when the pencil was put into her hand with the suggestion that the hand would write the experience without her knowing it, the suggestion worked itself out. It tapped stored memories and recorded them, although, quite in accordance with the suggestion, they were not allowed to enter even the hypnotic consciousness.

In the case of the crystal vision of the cablegram the conserved experience of hearing it repeated over the telephone, which was dissociated at the time by the strong rival interest of the patient's reading so that she was not

able to recall it at will, is translated into an image of the cablegram when the lady looks into the crystal. This it does in response to the suggestion which, in gazing into the crystal, she makes to herself that she will see something there that she does not know. This suggestion realizes itself, the unknown fact which is visualized as a result of the suggestion being the unnoticed telegram. In this case again the reproduction of the forgotten experience (in so far as it was reproduced) was due to effective suggestion; the failure to bring back the whole experience clearly into memory was due to the original act of dissociation.

There is no process in either of these cases necessarily involving mental activity. Parallelists and Epiphenomenalists have supposed that the whole of our activity goes forward without the intervention of consciousness at any point. The one mental act which we have decided to be necessary to the initiation of purposive activity is the act of expectant attention, wherein a neural process is initiated and directed toward a certain end. We have shown that the continuance of that mental activity is not always necessary to the continuance of the neural process initiated by it. Once such a process has been initiated, any further activity of consciousness is only necessary to stay the process or modify its working. If there is no further intervention of consciousness, the process continues to work automatically, guided and limited only by the structure of the neural system which has been set to work. Anything, therefore, *for which there is an already existing brain mechanism*, can be performed unconsciously if only the process is initiated in an act of consciousness and that conscious experience then dissociated. The two cases quoted above are of precisely this type: there is no process performed unconsciously for which the brain mechanism does not already exist; in each case this mechanism is set in motion by an act of expectant consciousness; and in each case, so

far as the process is unconscious, it is so because of the dissociation of an essential experience. There is nothing, therefore, in these phenomena which places any difficulty in the way of our theory of the unconscious as purely physiological.

It is on such manifestations of "subconscious intelligence" as are seen in his cases of unconscious calculation and unconscious versification that Prince chiefly relies in support of his theory of a secondary consciousness or "co-conscious." Here again the mere complexity of these processes need not deter us from regarding them as purely physiological, for we are in the good company of all the eminent Parallelists and Epiphenomenalists, and of the American Behaviourists, in assuming that these calculations and verses are the product of mere brain interaction without the intervention of consciousness. We part company with the psychologists of these schools only in asserting that these processes of calculation and versification could never have taken place unless initiated in a preliminary purposive act of expectant consciousness, and further that they could not have taken place unconsciously unless the brain mechanism for carrying them out already existed, having been built up largely under the influence of similar purposive conscious attention.

Both of these last-named conditions are fulfilled in the cases quoted. Calculation and versification are arts which the respective subjects had already learned: the brain mechanism was already there. Further, in both cases the unconscious process was initiated in an act of expectant consciousness and then dissociated. The calculation was initiated by a suggestion given under hypnosis, i.e. in a condition when the subject's whole attention is concentrated, with unhesitating belief, upon the operator's every word. It was then dissociated by the subject's being immediately brought out of hypnosis, all that had occurred

under hypnosis being immediately forgotten. In the case of the unconscious versification the initiating act of consciousness is not so easy to discover, but enough evidence is available to point out where it probably occurred.

The vision was preceded by a dream in which precisely the same picture was seen; but at the climax of the dream an emotion was felt which was not felt in the subsequent vision, but which was well described in the automatically written verse by the unfinished line: "And my rent soul . . ." As Prince points out: "It [the verse] expresses the mental attitude, sentiments and emotions experienced in the dream but not at the time of the vision." [1] We may agree with Prince that vision and dream were both fabricated by the same underlying process. Indeed, since the script even more adequately represents the dream than does the waking vision, we may ascribe it, too, to the same underlying process. Now we have seen that dreams are produced by wishes that, having been more or less permanently dissociated, but not negatived, are still capable of producing effects and are moving toward fulfilment by creating in consciousness the idea of their end in so far as the censoring dominant interest will allow. This wish of an earlier conscious experience is, then, the act of the expectant consciousness which initiated dream, vision and automatic verse alike. The precise nature of that wish only an analysis of the dream could reveal, but in all three of its products we see the artistic expression of an emotion which the subject was striving to repress.

The fact that certain recollections of the unconscious calculation and versification could be obtained later under hypnosis does not support the theory that these processes were performed "co-consciously." The facts which Dr. Prince records actually tell against his theory. All that investigation by hypnosis of the allegedly "co-conscious"

[1] M. Prince: *The Unconscious*, p. 207.

activity could reveal was that there were certain visualizations of the numbers, and of the lines of verse, which the patients under hypnosis could remember, but of which there was no consciousness at the time. These visualizations kept coming and going, and at length finalized themselves. But of the actual processes of calculation and verse construction nothing could be discovered. Of the versification Prince writes :

" All happened as if there was a deeper underlying process which did the composing and from this process certain thoughts without logical order emerged to form a subconscious stream, and after the composing was done the words of the verse emerged as co-conscious images as they were to be written. This underlying process, then, " automatically " did the writing and the composing. Hence it seemed to the subject, even when remembering in hypnosis the subconscious thoughts and images, that both were done unconsciously." [1]

The most important and most distinctly intelligent part of the process then did not form a part of the material available to the hypnotic consciousness. The availability of certain elements to the hypnotic consciousness, therefore, cannot be used as an argument to prove that there was any kind of secondary consciousness concerned in these processes as a whole. Indeed, the fact that an important part of the process was not available to the hypnotic consciousness would seem to show that no form of consciousness was concerned in the processes (save to initiate them), for if the visualizations belonged to a secondary consciousness, then the actual calculation and versification must have been done by a tertiary consciousness. This seems very like a *reductio ad absurdum* of the theory—and of a theory which, in any case, as we have seen, has no solid foundation.

In the light of the knowledge gained from the study of

[1] M. Prince : *The Unconscious*, p. 209.

suggestion, then, we conclude that there is no evidence, in phenomena of the type recorded by Dr. Morton Prince, of the working of any other mental factor than the waking consciousness. In regard to the evidence from dreams the same conclusion becomes clear. Though the stimulus of a dream is often some wish long dissociated and therefore unconscious, it is able to create the dream experience only because, having been dissociated instead of being negatived, the brain process initiated by it continues active and tends to the securing of that concentration of consciousness upon its end which is the first essential to its realization.

The only remaining argument for the "unconscious mind" is in the phenomena of neurosis and its cure. Here too the same explanation is applicable. The phenomena of neurosis are neither more nor less than effective suggestions which have become dissociated from consciousness instead of being negatived. Every neurotic symptom originates in some experience and persists as a neurotic symptom because that experience is dissociated. On this point all the psychoanalysts are agreed. These experiences are always of a type in which the emotions are strongly aroused (this again we assert on the united testimony of psychoanalysts) and therefore contain the conditions (concentrated expectant attention and auxiliary emotion) in which effective suggestion is favoured. "Every neurosis is unconsciously desired." [1] In saying this Hadfield voices the opinion of all his fellow-practitioners, and by it he means that every neurotic symptom has at some time been consciously and vehemently desired, either as an end or as a means to an end, by some element of the sufferer's personality, but that this desire has been dissociated. What we have seen of the working of suggestion is sufficient to explain what follows. The concentration of expectant

[1] Hadfield: *Psychology and Morals*, p. 32.

attention on the desired end or means is sufficient to initiate the process tending to fulfil it. The personality, finding itself incapable of negativing the desire (and thus staying the process) refuses to allow attention to dwell upon it—dissociates it—and the process goes on automatically, thus producing the neurotic symptom.

The causation of the symptom in this way can be plainly seen in each one of the cases we have already quoted as illustrations of unconscious functioning drawn from the study of neurosis. The bride of Freud's case, in order that her husband's honour may be vindicated, desires that the servant shall see the stain upon the cloth. This whole desire is later dissociated, for reasons for which the reader is referred to Freud's account of the case.[1] But the suggestion that she shall do something to draw the servant's attention to the stain, having been initiated as the beginning of the fulfilment of that desire, goes on fulfilling itself, whenever occasion offers, in the compulsive action which constitutes the neurotic symptom.

In the other cases the connection between symptom and dissociated suggestion is even plainer. The claustrophobia of Dr. Rivers's patient is due to the desire, on a certain occasion, to escape from an enclosed space because it was felt to contain a danger; the reason for the dissociation of this experience is not, however, so clear; the analysis has been left incomplete. The handshake of Dr. W. Brown's gunner is due to the desire, which a perfectly natural fear momentarily aroused, suggested by the very movement of the hand in serving the gun, that some such disability should save him from the horror of life in the trenches. The desire is hated, as prompted by fear regarded as unworthy; but it is too strong to be negatived. In the distress and weakness of war-strain and the experience of being blown up it is dissociated; but the suggestion of a

[1] S. Freud: *Introductory Lectures on Psychoanalysis*, pp. 221 ff.

shaking hand persists in fulfilling itself and appears as a neurotic symptom.

In Professor Lowson's case of the Australian soldier the most important symptom is the dissociation itself, amounting, as it did, to complete lapse of memory for whole periods connected with the central conflict. This central conflict is again the struggle to ignore the fear inevitable in a man in extreme and prolonged danger. The second most striking symptom, his mutism, was probably brought on in a manner similar to that of the hand-shake of the gunner mentioned above. The mutism began in a general paralysis and apparent unconsciousness after being blown up. It was simply the most insistent part of that general paralysis. This paralysis was probably suggested by the physical effects upon him of the concussion, and was welcomed by that part of the man—his natural fear—which he was consciously fighting to repress. So long as this fear was uppermost, maintaining control of his mind, the suggestions of paralysis and mutism which it had welcomed remained effective. When, after some days, his normal personality reasserted itself, it was only able to do so by completely dissociating the whole experience of the time when fear had had the upper hand. But in this case the physical symptoms (paralysis and mutism) are suggestions realized under the influence of a dominating fear. When that fear is no longer dominant, but it, and everything associated with it, is thrust out of consciousness, then these suggestions cease to be effective : memory for the interval is lost, but power of speech and movement return. A suggestion of pain in the head, however, which is in no way due to the morbid fear but to the actual experience of having a piece of shell extracted, persists after the return to comparative normality because the experience in which it originated, the operation while apparently unconscious, is then dissociated. This headache remains until the

experience is recovered six years later under hypnosis. He is never himself so long as the effort of dissociating the fear experience is maintained, and the explosion of some safety-valves is enough to renew the old conflict with fear. This conflict only ends again in the dissociation of a further set of experiences. On this second occasion the mutism, for some reason, remained even after the other symptoms brought on by the recrudescence of fear had been overcome. Evidently the long strain was telling, and the power of the man's personality to maintain the ascendancy was waning. The mutism, however, easily gave way to counter-suggestion, and the whole trouble ceased after the dissociations had been overcome under hypnosis.

Even the latent dream processes and censorship, which psychoanalysts regard as such irrefutable evidence of unconscious mental activity, find a readier explanation as physiological after-effects of processes initiated in acts of expectant consciousness. The dream censorship is the established tendency of the personality—that system through which alone the attentive consciousness can be aroused—which is a structure grained into the tissues of the brain. This system is adamant to those tendencies habitually resisted in the waking life, and can only be affected (and consciousness thus aroused) if the censored tendency can first arouse to activity the brain structure of some other idea. The impulse from the latent wish may then, by this by-path, find its way to control of consciousness and initiate a dream. The disturbing " wish " itself is but the physiological after-effect either of some wish which has been deprived of satisfaction but not entirely negatived in the recent waking life, or of some wish of an earlier day which has been entirely dissociated but still not negatived. Such physiological after-effects persist, probably, simply in the form of a condition of tension in some nerve structure, which results in the initiation of a nerve process (tending to

the arousal of conscious attention) whenever it is reinforced by some circumstance of experience or given an opportunity by the lowering of tension in the dominant systems. The process thus initiated would always tend first to the securing of expectant attention to the idea of its end (the fulfilment of the wish), for, as we have seen, it is such expectation that initiates the activity whereby the end may be achieved. It is for this reason that dreams always take the form of more or less distorted wish-fulfilments.

The whole range of phenomena which are commonly regarded as evidence of the existence of an unconscious mind, or part of mind, seem then to be explicable without that hypothesis. They are products of suggestion and therefore of consciousness. They only seem to be products of an unconscious mental activity because the experiences in which they were initiated have been dissociated and because it has been forgotten that processes which normally go on under the guidance of attentive consciousness may, under certain circumstances, go on automatically after attention has been withdrawn. The argument for an unconscious which is mental completely breaks down. There are degrees of clearness of consciousness; but there is no evidence whatever of unconscious mind. We cannot say that mind is consciousness and consciousness is mind; but we can say that we have no evidence of mind as active and experient except in consciousness. We need not conclude that when we cease to be conscious our minds cease to exist; but we must conclude that, so far as our evidence goes, all the activity and experience of mind is conscious.

What is still more important is the conclusion that must be drawn that mind acts as a unit. The theory of the unconscious pictures mind as consisting of a bundle of forces, or as a force sadly divided against itself, one part, or one force, pursuing one end unknown to the other and opposing that other without knowing it. It is not a unit

such as could exist for a definite end and pursue it from the beginning. It is a blind aggregate of forces loosely bound together and tumbling drunkenly around, now accidentally pulling together and now accidentally pulling against each other. But when these phenomena are understood as effects of suggestion the picture changes. All suggestion is initiated in an act of concentrated, exclusive, and therefore confident, attention, i.e. of expectation. It is mind in action as a unit. There may be different objects claiming attention, and attention may hover between. We may speak figuratively of a mind torn between conflicting desires. But the language is only figurative. When a mind hesitates, it hesitates as a unit. The object to which it attends is the complex one of the conflicting desires. The activity of its thought is initiated and guided by its attention to that complex object. The mind is still a unit with one activity and one experience, however complex that activity and that experience may be.

There is, however, one sense in which the term "subconscious" may be used of mental processes. It may be applied to that margin of conscious experience which lies right outside the range of attention. This margin certainly affects the experiences within that range. The selective activity of an interest works within the whole area of consciousness to its dimmest extremes, drawing some elements into the limelight of attention and excluding others. This may be seen in the fact that stimuli which possess an interest will flash into clear consciousness even though of a lower intensity than others which pass unnoticed. Thus the sound of one's own name is readily distinguished and clearly cognized out of a low murmur of conversation the rest of which is not understood. But though this mass of marginal consciousness must have its effect on what is clearly cognized, and probably also on the total feeling tone of the moment, the individual items in it

are not cognized. It may be said to be cognized as a whole, but not in its separate constituents. It helps to give the particular " set " or direction to attentive processes, but is not itself attended to. The items in it are therefore not subject to introspection and, if they pass out of consciousness without receiving any clearer attention, are probably never subject to ordinary processes of recall. Such items may be said to be subconscious or marginally conscious, and they include, as we have seen, certain ideas which are prevented by dominant interests from ever becoming more clearly conscious. These ideas must not, however, be spoken of as though they had a permanent existence as ideas " in the subconscious." There are certain brain traces which, when stimulated, tend to arouse them ; but even when thus aroused they can never pass beyond the dim marginal stage on account of the opposition of the contrary interest. In this marginal condition, however, they may, as we have seen especially in the study of dreams, have some indirect effect upon behaviour through stimulating other ideas. But their effect is always thus indirect. They never in themselves amount to the condition which we have described as expectation, and so are never the immediate cause of activity. It may be, of course, that some of the unconscious processes we have described stimulate into being these marginal ideas. But even so such ideas cannot be regarded as causes of those unconscious processes, or as having any directive power over them. They lack the quality of expectant attention which is needed for the initiation and control of activity.

There is, therefore, in the phenomena of unconscious processes, nothing to conflict with our theory of the human mind as a conscious active and teleological unit. So with this difficulty out of the way, and with an important addition to our knowledge of the results of mental activity in what we have seen of its widespreading indirect effects

and long-persisting after-effects, we are ready to pursue our inquiry into the nature of mind and its connection with physical processes. We must return, then, to the discussion of that urge which we have seen reason to regard as its fundamental expression.

CHAPTER IX

BODY AND MIND

THE evaluation of the Ideal is a part of the meaning which the concept conveys. Now, meaning we have seen to be composed of expectations, and expectations we have seen to carry with them tendencies to action. The conception of the Ideal, therefore, always involves a motive tendency. The Ideal, by reason of the expectations of which it is composed, becomes an urge.

The urge of instinct and the urge to play, or other recreative activity, we have likewise seen to be experienced as expectation. Indeed, expectation seems to be the one essential psychical condition of all physical activity. It is not the only condition—there must always be a physiological mechanism for the carrying out of the activity—but that physiological mechanism (except in so far as its movements have become automatic) lies inert until the creature *expects* it to move. Expectation is psychical, and it seems to be essential.

It is essential in the deliberate actions of man. It is essential in the instinctive actions of man and the animals. It is essential in the automatic reactions of psycho-pathological cases; though here it is not present in consciousness at the time of the occurrence of the symptom, but is hidden in the past. It is essential in the automatic movements of habit, though here again its effect is indirect; the habit was created by deliberate and by instinctive activities in which expectation played its part; when once the habit of a certain response to certain stimuli has grown, then it is only necessary that there shall be no contrary expectation present to consciousness, or indirectly effective, and the

habitual activity will regularly follow upon the occurrence of the customary stimuli. Everywhere, then, where it can be put to the test, we find that the activities of living things are directly or indirectly initiated by expectation. Further, we have seen that, given the necessary physiological conditions, expectation of an activity produces that activity. Our statement therefore seems to be justified, that the expectation of an activity is necessary to the performance of that activity by any organism; and expectation is the only psychical condition which does thus seem to be essential to organic activity.

This fundamentally necessary factor of expectation is not necessarily a definite expectation of a particular activity aiming at a more or less clearly foreseen result. It can only be that in an animal which possesses the memory of a prior experience. It can never be so in those numerous lower forms of life for which such an achievement of memory is impossible. The instinctive activities of most animals, though not altogether blind, are exceedingly short-sighted. "The prospective attitude of mind," [1] says Stout, "which characterizes instinctive activity may consist merely in looking for further development of the actual situation without forestalling the special nature of the development. For this it is only necessary to assume an awareness of the present situation as transitional—as something which not merely is, but *is to be*. . . ." "The important point," he continues, "is that the situation is apprehended as alterable. This is enough to make conation possible. For when what is actually present is apprehended as alterable, it is possible to want it altered in such a way as to satisfy the felt impulse."

It must not be thought, however, that the "prospective attitude of mind," the apprehension of the situation as alterable, the "conation" and the "felt impulse" are

[1] Stout: *Manual of Psychology*, p. 355.

distinct and separate mental facts. They are simply the progressive parts of the one instinctive process and must be regarded as developments in the expectations which guide the instinctive activity. The bird at nesting-time manifests a vague restlessness because sense stimuli, arising from its physiological condition and the season of the year, directed by the instinct structure, have aroused vague expectations producing that alert uneasiness which Stout describes as manifesting a " prospective attitude of mind." In this condition of mind the bird's attention is riveted by certain types of small stick, grass, hair, mud, or whatever may be the material with which its species begins its nest-building. The instinct structure then determines that this new set of stimuli shall result first in the expectation of an approach to this material, then, that being done, in the picking of it up, then in the carrying of it to a certain kind of place and the depositing of it there, and so on until the nest is built. Thus by a series of short steps the instinct structure determines that each successive stage in the carrying out of the instinctive activity shall arouse the expectation of the performance of the next short step. The successive expectations of activity are the successive " conations " or " felt impulses." These, though very short-sighted, must be fairly definite and precise; but the expectation of the end to be achieved by each step may be very vague, to the point of being, as Stout says, a mere apprehension of the situation as " alterable."

Throughout the whole of the animal kingdom, even in its lowest forms, this factor of urge can be distinguished. Even the Amœba, which is a microscopic speck of jelly, practically devoid of structure, crawling by successive waves of its almost fluid body over solid surfaces submerged in fresh-water pools and ditches, manifests behaviour which cannot be described as other than purposive and persistent. A description of a cannibal hunt by one of these creatures,

observed under the microscope, by Professor H. S. Jennings,[1] is convincing on this point.

Professor Jennings cut an Amœba almost in two so that the posterior third, in the form of a wrinkled ball, remained attached to the main body only by a slender cord. The creature began to crawl away, dragging the ball after it, when another Amœba approached at right angles and accidentally touched the ball. This Amœba then turned, and followed the other and, opening a large cavity in itself, began to engulf the ball. When the first Amœba turned, its pursuer followed and eventually completely engulfed the ball, the connecting cord broke and the first Amœba crawled away unpursued. The cannibal closed itself completely round the ball, leaving only a very small canal open at its anterior end. The substance of the ball, however, did not merge with that of its captor, but remained distinct and separate inside it.

After some time the hunter moved away with its prey inside; but presently this Jonah began to show signs of life, thrust out pseudopodia (tentacle-like protuberances) from its body and began to creep out through the still open, tiny canal. It succeeded in getting its pseudopodia outside, but then its captor sent out pseudopodia in the same direction and, creeping forward several times its own length, again engulfed it. Jonah a second time partly escaped, but was again enclosed. Shortly after, the cannibal started to move off in the opposite direction, and then Jonah, by a few relatively quick movements (for the Amœba is more snail-like than a snail) escaped entirely from its posterior end. But the cannibal was not to be easily deprived of its meal. It reversed its course, crept up to poor Jonah, engulfed it completely again, and started away. Jonah contracted into a ball again and lay quiet for about

[1] H. S. Jennings: *Contributions to the Study of the Behaviour of Lower Organisms*, pp. 200–202.

five minutes while its captor crawled away with it. In these movements, however, the cannibal's dinner became transferred to its posterior end until there was only a thin layer between it and the outer water. The dinner, i.e. Jonah, then began to move again, sent out pseudopodia through the thin wall, and soon passed bodily into the outer water and was free again. This time the cannibal did not pursue, and the two Amœbæ moved off in different directions.

Confronted with such a drama, which bears so complete an analogy to the striving processes of larger animals, we cannot but conclude that the same factors are at work. The responses of the Amœba to stimuli from food substances are akin to those of other beasts of prey, while the movements of the engulfed specimen portray a struggle to escape as real, if not as vigorous, as that of the fly in the toils of the spider's web. Nor is there any reason for regarding purposive striving in the Amœba as essentially different from that observed in higher animals. True, the Amœba has no brain and nervous system; but that does not prove that its behaviour must be something less than purposive striving; it proves instead that purposive striving is not necessarily dependent on brain and nervous system. We may certainly agree that the initiation and working out of any particular instinct process in the higher animals depends on neural structures; but here we have an indication that the purposive striving, which is the peculiar mark of instinctive activity, comes before such structures; that the life urge, rather than the physical organization, is fundamental.

In some dim way, then, the Amœba must be conscious. The expectations and lived experience which compose its consciousness must be vague and unintelligent in the extreme; but in that each creature showed persistency, with appreciation of success and failure, it reveals conscious.

ness of the existence of an end toward which it strives. This end-consciousness, and expectation of activity tending toward the satisfaction of it, is, then, a mark of all life; indeed, it is *the* mark of life. Life, as we experience it, and as we observe it, is fundamentally a purposive urge and, as such, it is composed of expectations of experience and activity.

The theory of a life-urge has been widely adopted and widely applied in recent psychology. Though there is no agreement as to its nature (and in the absence of any thorough attempt at its analysis), confident assumptions have been made in regard to its working and whole "psychologies" have been built upon those assumptions. The problem of its explanation is the rock on which the school of Psychoanalysis split into three sections. Freud interpreted it as fundamentally a pleasure-seeking impulse, the pleasure sought being, in the main, sexual. The term "Libido," by which the Psychoanalysts denote this urge, has thus become, for the Freudians, almost synonymous with "sex impulse." Adler interpreted the Libido as something akin to Neitzsche's "will to power" and developed, and has successfully applied, a theory of neurosis which attributes all these disorders to abnormal directions of this energy under the pressure of adverse circumstances. Jung takes a broader view. For him the Libido is a fundamental psychic energy, a life force which he identifies with Bergson's *élan vital* but regards as definitely teleological and tending, in different types of personality, to develop strongly either on the side of feeling or of conation, in the former case resulting in the type of mind which produces the phenomena which support Freud's interpretation, and in the latter case those which support Adler's.

This broader view of an urge or drive which manifests itself throughout life is one that finds favour with the majority of psychologists, but because of the peculiar

Freudian associations of the term "Libido" there is need of some other word by which this factor may be denoted. This need has been supplied by Professor T. P. Nunn, who suggests the use of the Greek term "horme." [1] This usage is being adopted by others, and psychologists are beginning to speak of this view of life and mind as "the hormic theory." [2] What is meant by this can best be expressed in Professor Nunn's own words:

"Upon this view man is not to be conceived as Descartes conceived him, namely, as an automaton plus a soul, or, with Epictetus, as a ghost bearing a corpse. He is, through and through, a single organism, a 'body-mind,' the latest term of an evolutionary process in which living substance has developed ever higher and more subtle functions. This view is as remote as possible from materialism; for though it invites the physicist to push as far as he can his physico-chemical analysis, it refuses to regard perception and thought, feeling and will as superfluous additions to a machine that would be complete without them. It preserves to the psychical all that ethics and religion require. It spiritualizes the body; it does not materialize the soul. . . . Starting from the position that there is more than physics and chemistry in even the humblest animal, it comes to view the history of life as a striving toward the individuality which is expressed most clearly and richly in man's conscious nature and finds, therefore, in that goal toward which the whole creation moves the true interpretation of its earlier efforts." [3]

Professor Nunn makes it clear that he intends the term "horme" to apply equally to the element of urge or drive found in all life processes, whether conscious or unconscious. The reader's intellectual effort to grasp the meaning

[1] T. P. Nunn: *Education: its Data and First Principles*, p. 21.
[2] Cf. McDougall: *Outline of Psychology*, p. 71.
[3] *Education: its First Data and Principles*, p. 18.

of the book he reads, his semi-automatic turning of the pages, the unconscious movements of his eyes and the secretion of juices in his abdomen for the digestion of his latest meal, all are, equally, hormic processes, though only the first, and to a lesser degree the second, are conscious. Similarly, Professor Nunn would describe the unconscious process which causes an emotional spasm in the throat of the soldier suffering from hysterical dumbness, or the train of associations which impelled Freud's lady patient to stand in a certain spot and ring for her maid, or that which arouses the fear in the sufferer from claustrophobia, as hormic processes, though unconscious.

Of the nature of the activities of lowly organisms he expresses doubt. They are certainly hormic, he maintains, but they may or may not be conscious and conative. On this point we have carried the theory a step farther and have contended that even the strivings of the Protozoa, such as the Amœba, must be regarded as conscious. To this position we are forced by our analysis of purposive striving as consisting of expectation. This understanding of conscious striving we were led to by the study of unconscious processes, of suggestion, and of instinct. The facts gathered in that survey, particularly those from the study of suggestion, throw light on the question of the relation of conscious and unconscious hormic processes, and further justify the contention that the struggles of the Amœba must be regarded as conscious.

We have seen reason to believe that pathological, unconscious processes have all been initiated in consciousness by that peculiar act of attention which we distinguished as expectation, and that processes thus initiated go on unconsciously if attention is turned from them without first negativing them—as it normally, automatically does when they are no longer needed. This means that at least some hormic, but unconscious, processes were initiated in

consciousness, and have gone on continuously since or have set up conditions whereby they automatically and unconsciously recur upon the presentation of certain stimuli.

But pathological symptoms are not the only processes of this nature. The movement of the limbs and body in walking and maintaining balance, and of the tongue in talking, were once conscious activities, but now are no longer necessarily so. May not every physical function similarly have been first initiated in consciousness and then allowed to become automatic?

In the present state of our knowledge this suggestion is scarcely capable of proof. Growth is still a profound mystery. It remains a mystery because the attempts made to work out a mechanistic theory of growth have so failed as to point to the necessity of the recognition of some category other than those of physical science. In our explanation of the behaviour of animals we have seen it necessary to recognize such a category—the factor of expectation—and, since we have found, in advanced stages of the organism's development, that processes initiated in consciousness may become automatic and unconscious, though still functioning, and that physiological processes which lie beyond the control of the conscious will are yet amenable to influences from consciousness by the method of effective suggestion, then surely it will not be a too hasty jumping to conclusions to adopt the hypothesis that this same factor of expectation may be at work in the growing stages of the organism's development.

Such an hypothesis supplies that element of purpose in development which many biologists have felt the necessity of postulating, and this it does simply by recognizing the effectiveness, at an early stage, of a factor which the psychologist has been compelled to recognize in order to explain the activity of the developed, higher organisms.

On this view we have an explanation of the place of consciousness in hormic process. Those hormic processes which are unconscious, such as the movement of the eye in reading or the working of the abdominal organs, are habits of the organism which are formed and fixed. At one stage in the development of the embryo, it must then be assumed, these responses to the stimuli required the same expectant consciousness as, some time after birth, was required in responding to those stimuli of a rudimentary instinct which impelled it to its first attempt to walk. But, before consciousness was required for this and other new tasks, the reactions of these earlier matured organs had become fixed and automatic; consciousness, withdrawn from them, became absorbed in the new developments and unable deliberately to return to the former task. At a later stage still, the movements of walking become fixed and automatic, no longer requiring attention; consciousness, withdrawing from the task of their control, leaves in operation a set of conditions which bring about a regular response to the accustomed stimuli—a habit of walking which consciousness, though not so completely withdrawn as in the other instance, finds it hard to interfere with.

Consciousness, then, is not a later development, an advanced type, of hormic process. The hormic processes which are not conscious are the spoils of battles which consciousness has won and from which it has passed on. The Amœba need not, because its hormic processes are relatively so simple, be considered as devoid of consciousness. Those processes are simple because it has won so few battles. It has developed very few entirely automatic and unconscious hormic processes, and is probably still at the stage of consciously striving in some comparatively simple things which creatures of a somewhat higher order have allowed to become automatic. Consciousness is not a higher type of life. It is rather in the fullness and scope

of consciousness, made possible by the number of necessary functions which can be performed unconsciously, that the measure of advance in life lies. Consciousness is simply the point, in all the hormic processes of an organism, in which its life is most alive. It is the growing point of life.

Horme, thus understood, is not merely an aspect of mind; but rather, all life is horme and mind—in the narrower sense of the individual human or animal mind—is a certain manifestation of horme or life. (In a wider sense of the term, we believe, all life, and even matter itself, may be described as mind, or expressions of mind. But that is to anticipate a later part of our discussion.) In the narrower sense mind is synonymous with consciousness. But in saying this it must be remembered that consciousness is not merely a totality of present and changing states. A mind or consciousness is a complex but unitary thing which possesses, besides its present states, certain more or less definite potentialities and certain relations to the past and to the future and to things surrounding it in the present. Instinct, habit, sentiment, knowledge and memories not at present being thought of, etc., though not in consciousness, exist as potentialities of consciousness. They are not a part of mind, but they belong to mind. Mind is the growing point of the living or hormic process, and a growing point with a certain definiteness of direction given to it by its relation to the whole.

Conation, too, needs to be distinguished from horme. By the former term psychologists have long denoted that element of drive, urge, or felt tendency toward an end, which is a part of our experience in purposive action. Some have given it a wider connotation, even making it equivalent to what we have called horme; but the term will be more useful if we confine it thus. Conation is horme of which we are conscious. Horme includes all those elements of life process, both conscious and uncon-

scious, which transcend the categories of physics and chemistry. Conation includes only those at the growing point. This means that conation is the fundamental fact of mind and that it is *immediately and subjectively experienced.*

The question of what it is that we are immediately aware of in experience has been one of the battle-grounds of philosophy and psychology. It is a question which one would expect introspection satisfactorily to answer, but which has proved a most complicated problem. So difficult does it seem to be to secure unanimity on this matter of our continual experience that one suspects that, owing to its exceedingly elusive nature, the answers of psychologists have been decided by the exigencies of psychological theory rather than the psychological theories decided by the answer to this question. On such a question this is perhaps inevitable so long as the psychologist depends on his own introspections alone. But recently this question has received attention in several careful and elaborate researches carried out each with a considerable number of subjects unbiased by any very definite presuppositions. The results obtained in each case contain such a large degree of unanimity that they must be admitted as valid so far as they have gone. In the researches of Aveling,[1] Ach,[2] and Michotte and Prüm,[3] the subjects found that in choice and volition there is, beside the kinæsthetic sensations, verbal images and affective consciousness, an immediate awareness of self-activity. This factor is not easily distinguished. Subjects frequently at first reported an experience of activity as part of their consciousness when choosing or willing, then subsequently they analysed this into a mere complex of kinæsthetic sensations. But always as

[1] F. Aveling: *The Consciousness of the Universal and the Individual*; also *British Journal of Psychology*, January 1926, *The Standpoint of Psychology*.

[2] N. Ach: *Uber den Willensakt und das Temperament*, Leipzig.

[3] Michotte and Prüm: *Étude Expérimentale sur le Choix Volontaire et Ses Antécédents Immédiats; Archive de Psychologie*, 1911.

they became more expert and accustomed to the conditions of the research, they further distinguished this elusive element of their total awareness which they variously described as "acting," "doing," "directing oneself towards," "awareness that it was *I* who acted," "myself doing," "self-activity." The difficulty of noticing this element of experience is easily understood, for it is the one constant factor of all experience, and we therefore tend to take it for granted and pass over it to notice only the other and changing elements. But scientific psychology has no longer any need to doubt the fact that it is there—that our conation is immediately experienced as our self acting. It is this experience, we believe, which is fundamental, all others being but changes in its progress or direction.

It is changes in the progress of the experienced conation that we describe as *Feeling*. The experience differs according to the ease with which the conation goes forward toward its end; it is this difference which constitutes pleasure and pain. Instead, therefore, of speaking of feeling as one aspect of mental process, co-ordinate with conation, it would be better to speak of pleasure and pain as two aspects of conative experience. Pain, thus understood, must, of course, be distinguished from the organic sensation of pain. To keep this distinction clear it has been suggested that the pain of unsuccessful conation should be designated "unpleasure." It should also be remembered that there is no such thing as a sensation of pleasure. Sensations may be pleasurable or unpleasurable. They will be either according as they aid and harmonize with our conations (or rouse conations which harmonize with them) or, on the other hand, obstruct our conations or arouse conations which are opposed to them. This is the reason for the vast difference in the pleasurable effect of exactly similar sensations under different circumstances:

a light touch upon her hand will make the cinema actress thrill with delight or shudder with horror, according as it comes from the man she loves or the man she abhors. Those sensations which seem to be invariably pleasurable, such as certain tastes, odours, colours and sounds, are so because connected with certain instinctive conations which they regularly tend to arouse.

Sensation, however, is not so easily explained as ultimately consisting of conative experience. Yet we would submit that here lies the answer to an ancient and baffling problem. It must be remembered that all the organs of sense, being alive, are centres of hormic process. Every contact which produces sensation must produce a change in the hormic processes of that organ. At one time, we have seen reason to assume, all the hormic processes of that organ were conscious. Having now become entirely automatic, the striving processes of the organ are no longer conscious. The only element of consciousness, it seems, which it has been beneficial to the organism as a whole to retain in the processes of these organs is a consciousness of the changes produced in their hormic processes by external contacts. This consciousness of certain changes in the hormic process of a sense organ, we would suggest, is that which constitutes sensation. All the varieties of sensation are due either to the different sense organs (or parts of organs) the hormic processes of which have been changed, or to differences in the changed processes themselves of the one organ. The sense organ must, if this explanation is to hold, be regarded as consisting of not only the end organ of sense, but also the sensory nerve and the cerebral centre with which it is connected. This whole organ must be assumed to be animated by a unified hormic process.

Emotion, too, can be seen to be but a differentiation of conative experience. Its nature has for long been a matter

of dispute among psychologists. William James [1] contended that emotion is nothing but a congeries of sensations, mainly organic in origin, due to the physiological processes set in motion upon the excitement of an instinctive reaction. William McDougall [2] has put forward the theory that emotion is the affective part of an instinct process, and as such the central and dynamic part of it. The consensus of opinion at the present day appears to be in favour of something akin to McDougall's position. The interpretation of the hormic theory which we have put forward leaves a place for the facts adduced in support of both theories. It will be sufficient here to relate emotion to the rest of our theory without entering upon any elaborate discussion of the question.

It is conation, not emotion, that supplies the dynamic of an instinct process. Many an instinctive action is performed without felt emotion, the emotion sometimes appearing afterwards, sometimes not at all. It is the fact that emotion usually becomes violent if the instinctive action with which it is connected is inhibited or prevented that has led to the conclusion that emotion is dynamic; it has been thought that this is due to the damming up of the " psychic energy " of the emotion which is unable to find outlet in action. This heightening of emotion at such times rather appears to us as Nature's method of securing a further continued and more complete concentration of attention upon the end of the instinct which is being frustrated.

James has pointed out how largely emotion is composed of sensation by bidding us try to imagine an emotional state devoid of the customary sensations, and saying that we shall find that we then have nothing left. To this it must be replied that emotion also contains meaning. As Professor Stout [3] points out, the anger of a cat on seeing

[1] James: *Principles of Psychology.* [2] McDougall: *Social Psychology.*
[3] *Manual of Psychology*, p. 413.

her kitten removed is due to the interference with parental instinct. The cat's experience of anger is not merely a complex of sensations of beating heart and bristling fur, etc. It includes the experience of an instinctive conation, with a more or less clearly cognized end, and impelling to certain, definite, purposive activity. The experience of conation alone we would not call an emotional experience. Emotion is an experience of conation rendered the stronger, firstly, by the concentration of attention in it secured by a complex of sensations due to organic reflexes set up by the conation (especially if hindered), and perhaps, secondly, by a more or less definite cognition, and consequent desire, of the end toward which the conation moves. Feelings of pleasure and unpleasure enter into the emotional state according to the success of the progress of the conation, and are strong or weak according to the strength of the conation and the relative degree of success or failure. Violent emotion is rarely entirely pleasurable, for the violence is usually due to the hindering of the conation; it is, as we have said, Nature's method, under such circumstances, of securing a still stronger conative effort through a greater concentration of attention.

The fact that simple apprehension of meaning enters into the complex experience we call emotion does not require us to qualify our description of it as a differentiation of conative experience, for meaning itself may, since we have seen it to consist of expectation, be so described.

This brings us to the problem of the nature of cognition or knowing; and here we are face to face with a stubborn and ancient philosophical problem—that of the theory of knowledge. The explanation of cognition, we believe, lies in the view of conation as an immediately conscious process: the data of cognition are given in the actual experienced conation. In that experience there is the awareness of activity, of having an end and striving for it,

and of producing changes in experience which are immediately related to the preceding activity. And since the experienced activity finds resistances to itself, there is immediate consciousness of the existence of something other than the striving self. Sensation and emotion, satisfaction and dissatisfaction, pleasure and pain, we have already shown likewise to arise in this immediate conative experience. But these experiences of activity and of contact with an external world do not form the whole of the extent of consciousness. The mind, in attending to the items of its experience, becomes aware of relations between them. Thus it comes to know of Causation (primarily as the relation between its own activity and certain changes in its experience), of Time, Space, Identity, Likeness, Otherness, etc. Further, in attending to a presentation and a relation it can call into existence a new item of knowledge. Thus does man's thought transcend his sensory experience. These facts, together with experimental proof of them, have been brilliantly expounded by Professor Spearman.[1]

Here, then, are all the materials which we cognize given in immediate consciousness. But cognition is usually defined as something more than consciousness, and as an act of mind distinct from conation. In particular, there are some items of our experience which, as we have recognized, remain only marginally conscious (or subconscious) and are never known as separate constituents of experience. Does this constitute a difficulty for our theory? On the contrary, it enables us to point to the reason why psychologists have usually felt it necessary to distinguish between consciousness and cognition. Cognition of any fact of experience requires that a certain degree of attention be concentrated upon it. This means that it is made to stand out relatively separate and distinct from other items

[1] Spearman: *The Nature of Intelligence.*

in the total field of consciousness. This act of attending is the act of cognizing. The degree of attention determines the degree of clearness of cognition—relative to the distinctness of the immediate experience. That change in hormic process which constitutes a sensation, or sense datum, may take place; but it is not cognized as such until it has acquired a certain degree of clearness. Unless this is done, it remains, certainly not entirely unknown, but only known implicitly as part of the total marginal area. This margin is cognized merely as a whole. It thus forms a background to the items attended to and has its effect on the movement of attention and the process of expectation; but no individual item in it can be said to be known as such.

The last of the phenomena of mind which we need to interpret in harmony with our theory is the fact of Memory. The mind is able, not only to know the immediate, passing present, but it can, in a certain sense, bring back again and more or less clearly re-live that which is past. This preservation of after-effects of experience, and the way in which they affect the present, we must next endeavour to explain.

In our previous brief discussion of memory in connection with the question of dissociation we left the central problem —that of the medium in which memories are stored—untouched. But if the hormic theory, as we have expounded it, is to be regarded as adequate, this problem must not be ignored. The differences of opinion upon the question, which exist among psychologists, must force the admission that the theory of memory is at present in a very unsatisfactory position. This appears to be due to the unwillingness of those who hold theories akin to the hormic to recognize the adequacy of the physiological medium as storehouse, and to the inability of the Mechanists and Parallelists, on the other hand, to explain the experience of remembering without recognizing in it the effective

operation of a mental element. It may be claimed as an important contribution to the proof of the theory we have put forward that it presents a solution of the difficulties of both theories.

Those philosophers who hold that the facts of behaviour are not explicable apart from the recognition of an interaction between body and mind usually regard memory as one of the strongholds of their position, and contend that the medium or form in which memories are conserved must be considered as psychical. But the explanations of what this medium or form precisely is, and of how these conservations come to be transformed, from the state in which they are not clearly present to consciousness as memories, to the state in which they are thus present, have been various and never entirely satisfactory.

Having recognized that "the unconscious" is purely physiological, we are compelled to surrender the more usual position of Interactionists, and in doing so we escape the metaphysical difficulties with which it is surrounded. Processes which, if they were conscious, could only be called "memories," we have learned from the study of hypnotic and pathological cases, may go on unconsciously and may affect conduct just as definitely as do real, i.e. conscious, memories. We must, therefore, either accept the mysterious and unsatisfactory concept of an unconscious mind, or part of mind, and give up the clear and simple explanation of unconscious processes which we have seen ample reason to adopt, or we must recognize that the medium in which past experience is conserved for purposes of memory is purely physiological.

So far as the processes of registration and conservation are concerned, there are no serious difficulties in the way of their physiological explanation. It is only when we consider certain characteristics of the process of reproduction, the actual experience of remembering, that difficulties

arise—difficulties which, however, disappear when we recognize the essentially hormic nature of that experience. Before proceeding to criticize the physiological theory of memory process, however, we had better have before us a clear statement of it, and for this we cannot do better than refer to Morton Prince :

" With every passing stage of conscious experience, with every idea, thought or perception, the brain process that goes along with it leaves some trace, some residue of itself, within the neurons and in the functional arrangements between them. It is an accepted principle of physiology that when a number of neurons, involved, let us say, in a co-ordinated sensory motor act, are stimulated into activity they become so associated and the functional paths between them become so opened or, as it were, sensitized, that a *disposition* becomes established for the whole group, or a number of different groups, to function together and reproduce the original reaction when either one or the other is afterwards stimulated into activity. . . .

" Similarly, a system of brain neurons, which in any experience is correlated in activity with conscious experience, becomes, so to speak, sensitized, and acquires, in consequence, a ' disposition ' to function again as a system (lowering of thresholds ?) in a like fashion ; so that when one element in the system is again stimulated it reproduces the whole original brain process. . . . But it is not until these physical registers are stimulated and the original brain experience is reproduced that we have memory. If this occurs, the reproduction of the brain experience reproduces the conscious experience, i.e. conscious memory." [1]

Against this theory of memory as depending on brain traces (or " neurograms," as Prince calls them) McDougall, some years before, had urged that it cannot explain the

[1] Prince : *The Unconscious*, pp. 119–120.

influence of *meaning* upon facility of memory.[1] It may take a hundred repetitions, he points out, before a person is able to repeat by heart a row of twenty nonsense syllables, but a passage of significant prose or verse containing twenty syllables can be repeated after one reading.

It must be remembered, however, that conservation and reproduction depend upon the nature of the registration, and this fact may merely prove that the brain processes involved in the conception of a meaning leave a much more definite, more widely associated and more closely knit, brain trace or neurogram than do those involved in almost meaningless and isolated sensations. This is just what we should expect, for the knitting together of brain traces into a neurogram is not so much due (as McDougall [2] suggests that the exponents of this theory believe) to the mere simultaneity or immediate succession of the excitement of neural elements as to the fact of the brain processes, which leave the traces, forming part of one continuous process. The excitement of any part of the connected traces left by such a process is, then, as Prince says, likely to lead to the more or less complete re-excitement of the whole. The least definitely connected parts of the whole neurogram will be those involved in experiences only accidentally connected with the central thread of meaning; other indefinitely connected parts will probably be those concerned in the mere sensations or in the cognition of sense symbols which conveyed the meaning. Thus, as McDougall points out,[3] it is possible to remember the meaning of a sentence without being able to remember the exact words of it, and, we may add, without remembering the occasion on which it was heard or the person by whom it was spoken.

[1] McDougall: *Body and Mind*, chapter xxiv.
[2] *Ibid.*, p. 339.
[3] *Ibid.*, p. 336.

The real difficulty in this theory is that a memory is *not*, as Prince says it is, *a reproduction of the original conscious experience*. If memory is due to the reproduction of a brain process (Prince should never have called it a brain "experience," for it is not the minute changes in the brain which we experience), and if experience were nothing but a mental correlation or reflection of brain processes, as the Parallelists and Epiphenomenalists say it is, then a memory ought to be an actual reproduction of the original experience. But that it most decidedly is not. There is a world of difference between burning one's finger and remembering the pain a week later. There is no similarity between the experience of losing one's temper in public and the experience of remembering it after in private. Which horn of the dilemma, then, shall we declare to be wrong —the neurological theory of memory conditions, or the Parallelist and Epiphenomenalist conceptions of experience? The former we have seen to be well grounded. Obviously it is the conception of experience that is wrong. Experience is not a mere mental correlation or reflection of brain processes. It is horme, acting in and through brain processes, and affected by them.

Consider the position from the standpoint of the hormic theory, and the difficulty disappears. It is horme itself, and the changes in direction of horme, that constitute experience. The burn is experienced as a sharp change in the ordinarily unconscious hormic tendency of the pain spots of the finger and their attached neurons. The anger is experienced as a complex of one definite hormic tendency and various hormic changes. But, when the brain traces left by these experiences are re-stimulated later (it is probably only the traces left in the association areas of the brain that are re-stimulated in memory) in the process of remembering, these new (memory) experiences then form part of a very different hormic process or experience. The

direction of hormic tendency in regard to them is then, on account of the way in which they have been introduced into the total experience, entirely different from that on the original occasion. The experience is therefore different; it is an experience, not of sensation or emotion, but of memory. But let the whole of attention be concentrated upon the remembered experience, everything else sinking into oblivion; or let the memory be thrust in on a blank of experience as in hypnotic suggestion or dreams; then the hormic tendency in regard to the neural excitement cannot be other than on the original occasion; the experience appears to be real; instead of memory we have hallucination.

The hypothesis of horme, we may claim then, has appeared as a clarifying concept in the elucidation of every psychological problem to which we have applied it. We found the hypothesis necessary in order to a satisfactory explanation of the sources of human and animal activity. We found that it enabled us to obtain a rational explanation of the extraordinary facts of abnormal psychology and that these facts in turn contributed to a fuller understanding of hormic process. In applying the theory, thus understood, to the well-recognized principles of normal psychology, we have found that it has enabled us to see these in clearer light and weave them into a consistent whole. In short, we may claim for the hypothesis that, when applied to the known facts of mind, it *works*. But every living creature is body as well as mind, and hitherto we have merely assumed the interaction of horme with the physico-chemical structure of body wherever observation and experience indicated that interaction. We have as yet made no attempt to explain that interaction or show that it is possible.

In the history of philosophy this problem has been found such a knotty one that many philosophers have felt compelled to deny the possibility of interaction and assert

that those experiences which seem to us to be so obviously cases of our mental experience affecting, and being affected by, physical reactions are a mere delusive appearance due to the close co-ordination of mental and physical facts. This co-ordination some (the school of Epiphenomenalism) believe to indicate that mind is a mere phosphorescence over, or reflection of, physiological process; others (the school of Parallelism) attribute it to a mysterious arrangement of the universe whereby two discrete chains of causation, the physical and the mental, move side by side and step by step without interacting, but each so nicely balanced in relation to the other that for every experience and "unconscious mental process" (for such a contradiction in terms they are forced to assume) there is a parallel brain process.

We need not here enter into discussion of the metaphysical and psychological difficulties of these theories. In regard to Epiphenomenalism they are so great that this theory has been almost universally abandoned by the Mechanists for that of Parallelism in one form or another. But the difficulties in the way of Parallelism are also great, and, especially since the publication of McDougall's great defence of Interactionism in *Body and Mind*, there has been a strong movement in philosophical circles away from this fold. It is fairly safe to conjecture that, but for two facts, Parallelism would now be generally out of favour. One of these facts is its great convenience as a methodological postulate. It leaves the biologist and the biochemist free to pursue their researches and to push the mechanical explanation of the processes and behaviour of living organisms farther and farther without having to admit the possibility of these processes and behaviour being influenced by an intrinsically incalculable mental factor. On the other hand, the psychologist, too, feels free to seek, and be content with, a psychological explanation and

description of all mental phenomena. The second fact which leads many to decide in favour of Parallelism is the real difficulty of conceiving the nature of the interaction between two such apparently utterly diverse sets of facts as those of mind and body. "How," it is constantly asked, "can the movement of the smallest molecule of matter be affected by such an utterly different fact as a desire or any other fact of consciousness?" The asking of the question is deemed sufficient answer.

It is this difficulty which is the real barrier to the acceptance of Interactionism, for the mere convenience of Parallelism as a methodological postulate is no true justification of its adoption as a metaphysical conclusion. It is this difficulty, therefore, which we must attempt to minimize or clear away if the theory of Interaction which we have put forward is to be made acceptable.

The difficulty is largely one of the philosopher's own creating. There is no necessity to regard body and mind as two discrete and utterly diverse sets of facts. We find the human or animal organism a living unity—a body-mind. The two are not separated in our experience; they are only separated in our thinking about our experience. Because there are bodies which apparently are not living unities, there is no reason why we should expect the categories which seem, up to a certain point, to explain the one to explain the other also. It is only when we have mentally separated the living cell into inanimate molecules that the difficulty of explaining the movements of the molecules in the cell arises. In the living cell we are faced with facts, not merely of mechanical, but of hormic processes. Let us, in turn, face the facts and, instead of stubbornly insisting that the hormic processes must be understood in terms of the mechanical, accept both sets of processes and see whether they may not each help us to understand the other better.

Accepting hormic process in the living cell as a fact, then, we may ask which may be assumed as fundamental —the cell organization or horme? In life drawn from antecedent life there is no question as to the answer; the germ or sperm cell is a creation of the hormic processes of the parent body. But life must have had a beginning, and this is where the question presses. In the first living organism was it the cell organization which gave to its actions and reactions that element of "drive" which had never been present in the unorganized matter; or was it an element of "drive" in the unorganized matter which created the organization of the cell through which it then worked? There can be no third alternative except the assumption that the organization of the cell and the appearance in matter of an element of "drive" were both accidents and their happy union a third accident—which is surely too unlikely a chapter of accidents—or the assumption that the Creator created first the one and then the other and then united them—which is quite an unnecessary number of creative acts.

The question is one which we have really answered already. We found it impossible to attribute the "urge of life" to the energy produced by any cell or organization of cells. Further, the cell is, in itself, a purposive structure. Surely, then, it is altogether reasonable to attribute the construction or organization of the cell to that purposive element which we find working in and through it. Horme, then, if once admitted as a factor in the processes of the living organism, must also be admitted as an agent in the creation of the first living organism.

This means that, before animate organisms existed on this planet, horme existed, in some form, in inanimate matter. This is a stupendous conclusion, and, when we remember that matter itself seems to be resolvable into something of the nature of "drive" and organization, it

is but a step to the conclusion that even inanimate matter is the creation of what, from the standpoint of our own limited experience, we can best describe as universal Horme.

But this does not mean that matter in itself must be assumed to be in some way conscious. We must remember that we have discovered that those hormic processes which have become regular and automatic tend to become unconscious. Consciousness we have found to be only evident at the growing point of life. The processes of inanimate matter are regular and automatic. If, in its formation and organization, the universe was ever conscious, in any such sense as we understand consciousness, there is every reason for believing that it is no longer so. As the physiological processes of the developing embryo pass into unconsciousness as they become fixed and automatic, and as consciousness becomes occupied with higher developments, so, we must believe, the physical processes of the material universe passed into unconsciousness as they became fixed and automatic and as its consciousness became occupied with higher developments.

Thus there came a time in the history of the universe when its consciousness became absorbed in a mighty new development, though localized in a minute point of space. This new development was that of the first living cell. In that tiny cell, we must assume, the consciousness of the universe became centred and the physical processes, long fixed and automatic, soon ceased entirely to be conscious, for consciousness is always manifest, and only manifest, at the growing point, and that first cell was then the growing point of the universe. From that first cell, and perhaps others thus brought into being, there sprang, in successive generations, myriads of other cells, some of which in course of time developed, in the process of evolution, into larger organisms, and some at last into man. But each organism

thus brought into existence remained, so long as it lived, a separate and independent centre of unified hormic process and therefore a separate and independent centre of consciousness, for every living organism is a growing point of the universe.

Consciousness, then, is not merely the growing point of life; it is the growing point of the universe. The physico-chemical laws of the universe are but the conditions fixed by the battles that the universe has won, the ground from which it has advanced to new conquests; they are the processes of the expression of itself which, in passing to a fuller expression of itself in the living cell, it has allowed to become automatic. What right, then, have we to demand that the living, conscious processes of the universe, and those processes (physiological) once conscious in the history of each organism, shall be explained in terms of the processes of its earlier history, the mechanical laws of Nature? Or why should we regard it as a thing impossible and inconceivable that the conscious processes of the universe should affect and be affected by those which have become automatic? Though, from our limited standpoint and experience, we cannot, as yet, understand the nature of the interaction between these two types of process of the universe which we observe in other organisms and experience in ourselves, is this ignorance of part of the truth any reason for denying that other part which is manifest to us in every moment of our conscious lives? The alleged inconceivability of the interaction of body and mind appears, then, as a myth created by the incompleteness of scientific knowledge. It is no barrier to the acceptance of a "hormic" theory of behaviour, and this, being supported by the known facts of psychology, may be made the basis on which to build a "hormic" philosophy.

Some may be inclined to stigmatize such a philosophy as "Vitalism" and dismiss it as an anachronism. But if

Vitalism implies a theory of life as manifesting an energy essentially different from that of matter, then it is not Vitalism. We have carefully refrained from speaking of horme as "psychic energy," for there are not two sources of energy in the universe—psychic, or mental, and physical. There is but one; and it is horme. Physical energy is hormic tendency grown automatic. Those features of the activity of living organisms which physical energy fails to explain are hormic tendency at its present point of development. Horme, in this latter sense, is not rightly described as "energy" at all. It is "urge." That which propels the body of the horse across the field is the energy of its muscles and other organs; the horse's body and the field and the movement of the horse's body across the field constitute a complex of hormic tendencies grown automatic, and therefore only in a more or less secondary sense hormic. But the gallop was begun by a touch of the spur and it may be stayed by a word from the rider, for these things provide an urge. The urge is not energy; it is horme, at the point where it is conscious, effecting changes in hormic tendencies which are no longer entirely conscious, and through them effecting changes in other and still more automatic tendencies. It is this process of changes in tendencies once hormic and conscious, now automatic, that we properly call expression of energy. Consciousness, therefore, does not express energy. When consciousness affects the activity of an animal, it neither adds to nor diminishes the potential energy of that organism. It simply affects the time and the way in which that energy shall be expressed.

The direction of physical energy by consciousness is effected through concentration of attention on an end, i.e. by expectation, as, for example, is manifested by effective suggestion. In lowly creatures this, as has been said, must be a very short and vague forward look, but still

a forward look. It is this end-consciousness of horme that is the motive power of progress. Horme can never be understood until we scan the whole page of evolution and history. Its ultimate nature is revealed only in the ends toward which it gradually, hesitatingly and erringly, yet persistently, moves. To the forward-looking consciousness there are, at every stage, possibilities presented, and horme reveals its ultimate nature in the nature of the possibilities to which, in the long run, it has chosen to urge. From the dawn of life (if we can judge what happened then from our observation of what happens now among the lowliest forms of life) the hormic tendency has been directed toward the expansion of life. In the process of this striving certain responses (striving responses) to environment have become automatic—the instincts. But the instincts have never constituted the whole drive of horme, or there could have been no progress. The fact of progress shows that horme tends to choose those ends which constitute the increase of life, not only in the preservation of the individual and multiplication of the species, but also in the fullness and scope which they give to the expression of an individual life. For the individual and the species the hormic tendency is " that they may have life, and have it more abundantly."

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